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Headquarters,
Department of the Army



❖ Special
focus:
31st Signal
Regimental
Symposium

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relays mes-
sage of Army
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Chief of Signal's Comments

OIF wartime posture main event of 31st Symposium

This year's Signal Symposium was defined by the sharp-edged silhouette of our current wartime posture; in fact, more than half of the Signal Regiment is deployed or preparing to deploy in support of Operation Iraqi Freedom, Operation Enduring Freedom and the Global War on Terrorism. All who have served or are serving in Afghanistan, Iraq or at other outposts in the War on Terrorism should know that the Regiment is enormously proud of what you've done, and of what you're doing this very day.

The year has passed quickly. Certainly, the main event was OIF, where the Army previewed the kind of high-speed, non-contiguous fight, distributed over great distances, that we envision in the Future Force. It was a fight in which joint interdependence and multi-national interoperability became the norm. It also demonstrated the power of networked information on the battlefield. And throughout the operation, Signal Soldiers performed miracles.

You installed and managed incredibly complex networks, extending global connectivity from those leading the fight to their headquarters in Kuwait, Qatar, Western Europe and the United States. You integrated new information systems "on the fly," in some cases just hours before units crossed the border.

We went to war with well-trained Soldiers and a proven workhorse, Mobile Subscriber Equipment. Though MSE has brought unprecedented tactical mobility, network connectivity and data capability, we knew even before OIF that MSE would not be able to handle the kinds of operations envisioned in the Future Force.

As we digest the lessons learned from OIF, it's clear that moving from our current systems and structures to those that will satisfy the needs of the Future Force commander is paramount. And we can't afford to wait—we must act now to bring critical network capabilities to

The near-term challenges came into clear focus during OIF. Commanders had to control forces dispersed over great distances, and had to do it "on the move." Signal Soldiers showed great ingenuity, adopting innovative, off-the-shelf solutions to meet these needs. We



BG Janet A. Hicks
Chief of Signal

can discern from these "on-the-fly" solutions an initial view of "what right looks like," that allows us to shape decisions for the current force.

We have to build a network that doesn't rely on isolated unprotected sites. Satellite communications linked widely dispersed forces, but often lacked the bandwidth and mobility required. Enhanced SATCOM and unmanned aerial vehicle "surrogate satellites" are needed to fill this gap.

Perhaps the most important outcome of OIF was that Army leaders saw first-hand the power of information and the value of the network that moves information. With commanders at all echelons validating the value of the network, there's a window of opportunity to gain support for needed relief, and to really effect change.

To explore comprehensive solutions that bring needed capabilities to the force right now, the Army's new Chief of Staff formed Task Force Network, led by the Signal Center. Task Force Network's mission is to recommend ways to speed the fielding of network capabilities in a standard, joint-compatible form, as part of a coherent, Army-funded program. You can read more about Task Force

Network in this issue.

The Task Force is building on work already done, including the ongoing Transformation Campaign Plan-Signal and Network Enterprise Technology Command's Integrated Theater Signal Battalion initiative.

The Regiment made significant progress in other areas during 2003. In less than 12 months we will implement the Information Technology/Information Assurance Force Design Update, which assigns 74B Soldiers to all echelons down to maneuver battalions, and adds Functional Area 53 officers and Specialty 254 "TOC Warrants" at maneuver brigades. On the training front, GEN Kevin P. Byrnes has designated the Signal Center as the Army Executive Agent for Lifelong Learning. He intends to make Lifelong Learning a reality across the Force, with the Signal Center as a central player. In equipping, the Phoenix contract was awarded for a tri-band terminal, with parallel development of a quad-band terminal. On the doctrinal front, Network Operations has taken hold in the joint community, and our Regiment is helping shape NETOPS alongside Joint Forces Command. We are also factoring NETOPS into Soldier training and will likely see more multi-functional than single-task Signal Soldiers in the future.

The Regiment grows stronger every day, blending the capabilities of bright, energetic people with exciting advances in technology. We face exciting challenges in the year ahead, but those challenges represent distinct opportunities for improvement. Working together, we will meet today's challenges and we will get the future right.

Editor's Note: GEN Kevin P. Byrnes is the commanding general of Training and Doctrine Command.

ACRONYM QUICKSCAN

OIF – Operation Iraqi Freedom
MSE – Mobile Subscriber Equipment
NETCOM – Network Enterprise Technology Command
NETOPS – Network Operations
SATCOM – Satellite Communications



COMMAND

Commander/Commandant

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Command Sergeant Major

CSM Michael Terry

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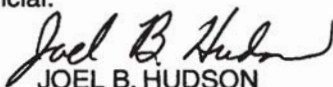
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Cover: The 31st Annual Signal Regimental Symposium, 'Meeting Today's Challenges, Getting the Future Right,' is depicted in this graphic illustration. Cover by Tammy L. Moehlman.

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By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Boutelle relays messages of Army's senior leaders, talks about future of Regiment

by SGT Ryan Matson

Two Signal Corps leaders spoke at this year's Signal Symposium, Dec. 3, in Alexander Hall.

LTG Steven Boutelle, United States Army chief information officer, G-6, and MG James Bryan, director of Signal Corps Transformation for the Department of the Army, Chief Information Office, G-6, both talked about the Army's senior leadership and visions for the future of the Signal Corps.

In his 58-minute speech, Boutelle talked about a wide range of topics – satellites, consolidating servers, basic training, the ongoing threat of global terrorism, but focused mainly on the new Army Chief of Staff, GEN Peter Schoomaker, and where he sees the Army going under his leadership.

"What I thought I would do is bring you in on where the chief is taking us, and what's happening in our Army," Boutelle said.

He said that since the September 11 terrorist attacks, the Army staff has transformed.

"For relevancy we have to change," Boutelle said. "Fact: people don't like change, they like to operate within their zone of comfort. Some of you aren't going to like what we're doing. That's OK, if you don't like it, you can find a better place to be, because if we don't change, we're irrelevant."

Schoomaker's changes will come rapidly, Boutelle said.

"Any new boss who comes in, he takes three to six months, puts his plan together, and the next three and a half years executing," he said.



LTG Steven Boutelle

The Army is undergoing the challenging process of balancing resources between providing what the warfighters need in Afghanistan, Iraq and other places and still making the smart decisions of knowing where to invest in the future.
-- Boutelle

"We're about two months into this new boss and he's laid out his 15-plus-one imperatives."

Boutelle said the Army is undergoing the challenging process of balancing resources between providing what the warfighters need in Afghanistan, Iraq and other places and still making the smart decisions of knowing where to invest in the future.

When looking at the new senior leadership of the Army, Boutelle pointed out many similarities. First, Boutelle noted, they are mostly new to their positions.

"There's a common thread

that runs through most of that group up there," Boutelle said as he pointed to a slide with the Chief of Staff of the Army and his support staff. "Not any one up there, with the exception of the G-8 has been there more than six months, actually four months."

"The second is that those people who were brought in, mostly are light fighters and special forces people. Schoomaker retired as the commander of the Special Operations Command in 1999."

Boutelle said he sees the new Chief of Staff as a person who returned to duty due to concern and a sense that he could provide urgent help.

"He picked up his cell phone and somebody asked him, 'How would you like to be Chief of Staff of the Army?'" Boutelle said. "How'd you like to get that phone call after being out of the Army for four years?"

"He did not come back to self-actualize, he did not come back for a promotion, he didn't come back with his own agenda. He came back because he believes the nation is at risk. He will tell you that his greatest fear is that he looks out his nice bay window there from quarters one and sees a mushroom-shaped cloud over Washington."

One of the main messages Boutelle said Schoomaker is trying to convey is that the threat of terrorism is still ongoing and the Army continues to fight everyday.

"When the Al Qaeda tried to take down the World Trade Center the first time, they only killed one person," Boutelle said.

"We know now they started

planning immediately after that, and five years later took it down. On September 11, they had a tactical strike, they killed 3,000 people. They missed the White House, they missed the Capitol, and for all practical purposes, they missed the Pentagon. We know – you can read an open source in the papers, and the U.N. (United Nations) report that came out yesterday – that they are being resourced and we have not been able to curve their resourcing. They're gaining in momentum in dollars, and they're planning. It may not be today, it may not be tomorrow and it may not be next year, but you're at war, your nation is at war and your Army is at war. That's one of the messages the chief tries to put through."

"Each of you needs to help us with the civilian populous to understand that," he said.

People are starting to assume the country's problems with terrorism have come to an end, Boutelle said.

"I know when I travel around the nation to see family and friends, it's like, 'It's over, you kicked the Taliban out of Afghanistan and now let's just figure out what we're going to do in Iraq, and it's over.' It's not over, and it's not going to be over for your generation and generations after that."

To combat this threat, Boutelle said the Chief of Staff will make sure the force has proper capabilities.

"He's going to resource our networks and our systems," Boutelle said. "He understands. He knows what this is about."

One of the immediate changes that will take place under Schoomaker's direction, Boutelle said, is the restructuring of basic training.

"So now in basic training, when these Soldiers come out of there, they will know what it's like to have live fire go over their heads, not once, many times," Boutelle said.

"Everyone will qualify (on a weapon) twice a year. They need to go out in basic training and go that 72 hours without sleep until you get into the zone. He is reshaping real time, and you're not gonna' see this in '06, '07, '08."

"He said 'what do you mean we're shortening basic training? We're not going to shorten basic training. We're going to make it more intense – we need a different type of Soldier today than we needed before September 11."

To fight the war on terrorism, Boutelle said Schoomaker will not let the Army go it alone.

"He's a joint guy," Boutelle

"I know when I travel around the nation to see family and friends, it's like, 'It's over, you kicked the Taliban out of Afghanistan and now let's just figure out what we're going to do in Iraq, and it's over.' It's not over, and it's not going to be over for your generation and generations after that."

-- Boutelle

said. "He looks at our programs. One day we were looking at the command and control system and said 'Doesn't C2PC (Command, Control, Personal Computer) do this?'"

"I said, 'Well about 80-percent of it.' He said, 'Good, take our money and put it with the Marines and C2PC. Get rid of our system and we'll use that system. Joint systems, not Army solutions, that's the name of the day with this chief."

Boutelle said the people fighting the war on terrorism don't only include Soldiers, but people like those exhibiting their technology in the Signal Symposium tent.

"I should add in the contractors," Boutelle said when breaking down the thousands of people making up the fighting force in the Persian Gulf. "We have 4,700 contractors employed in the Gulf right now. Do you know we've had 14 killed in action from hostile fire, 16

killed in non-hostile fire? This is truly an integrated Army...so when you go across the street to the tent that you need to visit and you spend time with those people over there, understand that those people are part of your team, and you have to remember they're part of your team because they make that stuff go."

The Signal Corps is in the midst of the fight, Boutelle said. He said 72 percent of echelon above corps Signal troops are deployed, and 65 percent of echelon corps and below.

He said a bevy of Signal units have been involved in the recent war effort, all with one thing in common, the places they have served.

"You've all been in the same general plexicon of countries," Boutelle said. "Our JSCE (Joint Communications Support Element) Commander, Jim Lien, I think at one time said it was 22 locations, back in March, 10 different countries, but I know it was Afghanistan, Egypt, Uzbekistan, Pakistan, Jordan, Djibouti, Kuwait, Qatar, Cuba, Iraq, the

Philippines, Romania and more."

He noted the travels and accomplishments of several Signal units, and singled out one National Guard unit in particular.

"I should note that the 234th National Guard unit that's underneath, at least for the time being, the 22nd Signal Brigade, has gotten more accolades than almost any organization out there," Boutelle said.

"That's a super unit, everybody who comes back raves about them. It's really hard to pick out particular units, and I don't want to do that, but I do have to mention that you are everywhere and you are peacemaking and you are at war."

He also mentioned some Signal equipment that has performed well in combat situations.

"We talked about networks in Iraq and Afghanistan," Boutelle said. "Blue Force Tracking turned out to be a real winner. It's FBCB2 (Force XXI

Battle Command Brigade and Below) on a satellite string – the same thing we put out in the Bosnia world, the Kosovo world, enhanced and on a different satellite.”

He said units are going to combine and change very quickly in the upcoming days.

During his speech, Boutelle emphasized the importance of the Signal Corps speaking with one voice when seeking funding.

“We have a reputation for coming in and speaking in multiple voices, and if you work on the money side of the house, if you come in with one voice and everybody says we need to do this and we need to resource this, they have no choice but to support you,” Boutelle said. “But it’s kind of like dealing with our friends in the hills sometimes. If one person comes in and says, ‘This other idea is a better idea,’ sometimes it gives our bean counters reason and logic to say ‘Signal Corps doesn’t know what they want, let’s come back next year.’ And the money floats away and pulls another bill... What I need is my industry partners, my Council of Colonels, and my brigade and battalion commanders and sergeants major to pull together and speak with the same voice. There’s a time when you stand up and say, ‘Ok, I don’t like it,’ and then salute and say, ‘but I’m going to execute.’ We cannot have dissenting voices... we need your support or you’re going to get nothing.”

He also said the Army has been relying too heavily on commercial satellites.

“You know we’re at 80-percent commercial satellite in the Gulf, 20-percent military,” Boutelle said.

“That needs to be reversed. We need to be 80-percent military supplemented by commercial. We have four satellite constellations coming up in

wants to see enacted is the consolidation of Army servers.

“We have servers everywhere, they’ve sprouted like a thousand flowers,” Boutelle said. “We’ve got to consolidate servers, you’ve got to help me on that.”

Boutelle said there are many servers running on five and 10 percent capacity.

“We cannot afford to pay the bill for the infrastructure we’re paying today,” he said.

He said saving money now is key to prepare for future cuts in funding.

“We talked about networks in Iraq and Afghanistan. Blue Force Tracking turned out to be a real winner. It’s FBCB2 (Force XXI Battle Command Brigade and Below) on a satellite string – the same thing we put out in the Bosnia world, the Kosovo world, enhanced and on a different satellite.” -- Boutelle

the next few years, that will help.”

“Commercial is good, but the commercial stuff is at risk. Those commercial downlinks around the world that we buy are a great risk. If somebody takes one of those down our entire theater can collapse in certain area, and that’s why we have to stay with military constellations.”

The \$78 million agreement with Microsoft was another key point of Boutelle’s speech. He said this enabled the Army to download the latest versions of Microsoft.

“The point is I want you to purge the old hardware,” he said. “We have got Windows 3.1 ‘95 and ‘98 out there. We can’t secure it. Get off it. Go to XP, Windows Server 2003 is on the contract, it will be compliant in the next few days. Get off the old hardware, send it to the property disposal office. Hardware is cheap. We have agreements with all your major hardware providers like Dell... We will not accept a computer unless it has our image on it.”

One of the cost-cutting measures relating to computers Boutelle

“When the American public believes we have put Al Qaeda and the associated organizations out of business, you will see a tremendous drop in your resources,” he said. “The budget, the bottom drops out of it. Start consolidating now or you’ll be in real trouble in three to five years.”

SGT Matson is the military editor of the Fort Gordon Signal newspaper. He has his degree in journalism from Penn State, and has been in the Army for two years. Matson is from Wyalusing, Pa.

ACRONYM QUICKSCAN

C2PC – Command, Control, Personal Computer
FBCB2 – Force XXI Battle Command Brigade and Below
JSCE – Joint Communications Support Element
U.N. – United Nations
U.S. – United States

Bryan speaks of changes in Regiment, need to manage bandwidth

by SGT Ryan Matson

What type of person does it take to be the director of Signal Corps Transformation for the Department of the Army?

Well, it looks like a job for...Cyberman!

MG Dave Bryan, also known as Cyberman for the character he created and assumed for several year's Signal Symposium, has been assigned the task as the Director of Signal Corps Transformation for the Department of the Army.

In a speech that lasted about an hour, Bryan addressed a full house at Alexander Hall Dec. 3 on such issues as changes for the Regiment, supporting nonlinear operations in a noncontiguous environment, the success of Blue Force Tracking in Operation Iraqi Freedom, ensuring all nodes can support a command and control element and managing bandwidth.

"I'm here in a new capacity," Bryan explained.

"I am still the commander of Joint Task Force, Computer Network Operations, but I have accepted the call, if you will, from LTG Boutelle to commit not only my experience and operational background, but my heart to a final objective. That is to establish a plan that will re-equip the Army with a whole new wave of advanced communications and information systems technologies, and at the same time reorganize the Regiment to ensure our relevance in



MG Dave Bryan

"Money is the fuel that's going to run this engine of change for us. We know the technology, and we know that industry can provide all the technology we need; it always has. It's a matter of figuring out which technology we need and which we can afford and in what sequence." -- Bryan

enabling the Army to take advantage of all that massive capability."

A lot of this change will be paced by money, Bryan said.

"We must reduce the pacing factor of change to money," Bryan said. "Money is the fuel that's going to run this engine of change for us. We know the technology, and we know that industry can provide all the technology we need; it always has. It's a matter of figuring out which technology we need and which we can afford and in what

sequence."

By managing the communications network, Bryan said a lot of the bandwidth problem can be alleviated.

"Everybody says they want more bandwidth," Bryan said. "Did you know the average satellite pipe is only subscribed 17 percent of the time? That's disgraceful. We're paying a lot of money for a lot of bandwidth, and frankly spilling most of it on the ground as white noise."

Bryan was introduced by SPC Kevin Gropp, a combat cameraman injured while documenting operations of his unit, the 101st Airborne Division, near An Najaf.

"MG Bryan is a paratrooper, a jumpmaster, a pathfinder, a Ranger, and I have been told, an all around great guy," Gropp, himself a Purple Heart, Army Commendation for Valor Medal and Bronze Star Medal recipient, said in his introduction of the general.

Bryan's speech was full of his trademark sense of humor.

He said he understood the objectives of Army Chief of Staff GEN Peter Schoomaker from sharing a similar background as a fellow light-fighter.

"I'm a light-fighter myself, a (Fort) Bragg guy," Bryan said. "I spent my time with tank units and yes, I learned how to chew Beechnut and spit out of a hatch without

getting it all over myself or the track, and that is an essential skill, by the way.”

When illustrating a point on how the Regiment needs to speak in one voice to avoid mistakes in communication that totally change a message’s meaning, Bryan read from the notes of kids in a fifth and sixth grade history class from their lessons.

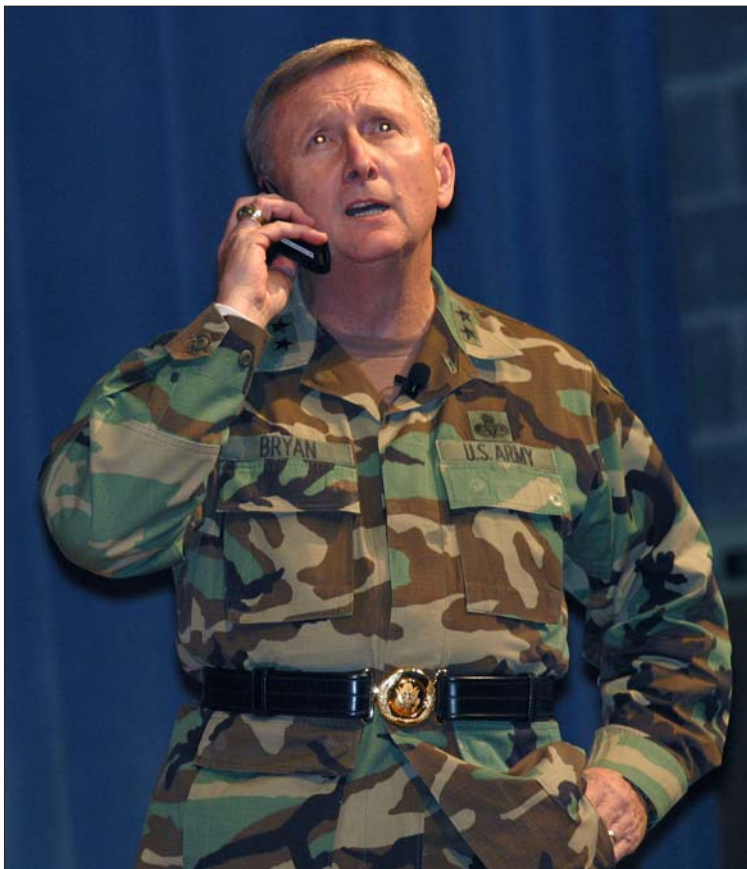
“You’ll get an idea that they were listening, but it didn’t quite get into the filters quite right,” Bryan said. Listen to some of these: Socrates was a famous old Greek teacher who went around giving people advice. They killed him for it. Apparently he died from an overdose of wedlock.”

“Julius extinguished himself on the battlefields of Gaul. The Ides of March murdered him because they thought he wanted to be king. Dying, he gasped out, ‘Same to you, Brutus!’

“Queen Elizabeth was the virgin queen. As a queen she was a

real success. When she exposed herself to her troops in battle, they all shouted, ‘Hoorah!’ and that was the end of the fighting for awhile.”

And of course, what Symposium visit by Bryan would be complete without a visit from his infamous alter-ego, Cyberman?



Bryan pretended to answer his cell phone taking a “call from the President” asking if he was available to save the universe.

Although Bryan didn’t don the cybersuit during his speech as he did last year, this year’s speech ended with an urgent phone call.

Bryan pretended to answer his cell phone to take a phone “call” from the President, asking if he was once again available to save the universe.

While Bryan exited the stage, a video of Cyberman flying to rescue the world played while Soldiers working in motorpools and other areas looked up to see the action on the screen behind him.

SGT Matson is the military editor of The Signal newspaper, Fort Gordon, Ga. He has his degree in journalism from Penn State, and has been in the Army for two years. Matson is from Wyalusing, Pa.

ACRONYM QUICKSCAN

BFT — Blue Force Tracking
OIF — Operation Iraqi Freedom

Establishing communications: *vital key to success*



LTG William S. "Scott" Wallace, keynote speaker at the 31st Annual Signal Regimental Symposium, is rendered thanks in applause by attendees and BG Janet A. Hicks.

One major challenge to providing updated technology to every soldier is lack of bandwidth. Unfortunately, the Army is a little late in requesting additional bandwidth as other service branches have gotten there first. -- Wallace

by Denise Allen

Past military training exercises overlooked and took for granted a vital key to their success.

"We pushed Signal units out days ahead," said LTG William S. "Scott" Wallace, former commander of V Corps, now commander of the Combined Arms Center and Fort Leavenworth. "Establishing communication should have been the exercise."

Wallace was the keynote speaker at the 31st Annual Signal Regimental Symposium Dec. 3 at Alexander Hall.

Wallace, who commanded troops in Iraq, spoke about lessons learned during Operation Iraqi Freedom.

"Battle communication on the move is a concept that works," he said.

Satellite e-mail, single-channel tactical-satellite radios and unmanned vehicles provided Wallace with a wealth of information in real time that line-of-sight couldn't touch.

Unfortunately, not all leaders had the technological capabilities that he did.

Line-of-sight communication with a commander tethered to his post doesn't work in the 21st century; however, most lower-level commanders found themselves tied to their posts depending on 20th century technology and not getting all the information they needed, Wallace said.

The optimum conditions would allow the most advanced technology into the hands of the trigger puller, he said.

One major challenge to providing updated technology to every soldier is lack of bandwidth. Unfortunately, he said, the Army is a little late in requesting additional bandwidth as other service branches have gotten there first.

Wallace said the time to be ready for the next battle is now. "We must do it now," he said. "If you haven't noticed, it's already the 21st century."

Ms. Allen is a staff writer for The Signal newspaper, Public Affairs Office, Fort Gordon, Ga.

Senior NCO Symposium Workshop discussions



by CSM Michael A. Terry

My fellow Signal Noncommissioned Officers and Soldiers, it is with great pleasure that I write this article for the *Winter Army Communicator* concerning the events during the 31th Signal Symposium.

This year's Signal Symposium was by far the greatest I have ever had the pleasure of attending or being involved with from any perspective.

The pride I have right now from this tremendous event comes from the Soldiers involved in the opening ceremony to the closing hours where we could gathered as a Regiment to celebrate successes and plan for the future. Even as we spoke and planned, technology was changing the very shape of our business, providing communications to the greatest military force in the world!

The Senior NCO Corps Workshop saw a multitude of units represented. It was with a great sense of pride that I acted as the master of ceremonies for the entire Senior NCO Workshop session.

In keeping with the Army's new vision, "Our Army at War, Relevant and Ready", we received the latest news from the Senior NCO leadership concerning: 11th Signal Brigade, CSM Oliver Forbes; 22nd Signal Brigade, CSM Ray Lane; 35th Signal Brigade, CSM James Jordan; CECOM, CSM Calvin Jones; Joint Communications Support Element, CSM Sylvester Curry; Network Command; and we received a briefing from the Visual Information unit for the Army, 55th Combat Camera, SFC Freddy Gruwell where we learned of the exploits and accomplishments of our own VI folks.

We received information from the Army Materiel Command and of the great things they are doing and providing to the Soldiers in the field. These briefings provided the leadership present with the latest informa-



CSM Michael A. Terry talks with a noncommissioned officer at the NCO Workshop.

tion on lessons learned and identified the Soldiers around the world who are making things happen when the going gets tough. I must say that our Signal Soldiers are providing vital support to the ongoing efforts in Operations Enduring Freedom and Operation Iraqi Freedom.

In an effort to understand the changes surrounding us, we conducted three Senior NCO workgroups. CSM McKinley Curtis III broke the Senior NCOs present into workgroups to discuss various topics in detail.

First workgroup: Realign MOS 31C/25C

One of the workgroups, led by SFC Todd Grisso, discussed a proposal to realign MOS 31C/25C so that it caps with MOS 31U/25U rather than MOS 31W/25W, and after two lively days of discussion here is just a snippet of the avenues

they explored:

Based upon new requirements, the workgroup determined the need to change the training methodology. Signal Soldiers who are trained on more theory, principles and concepts rather than physical boxes will better serve the Future Force.

The 31C/25C is predominantly trained on radio transmission fundamentals and very little on tactical automation; the 31U/25U is predominantly trained on tactical automation. MOS 31C/25C is a healthy and viable MOS in its current state, but 31C/25C NCOs experience a drastic learning curve when they cap into 31W/25W at sergeant first class. Capping 31C/25C with 31U/25U may reduce, but would not eliminate this problem.

The Office Chief of Signal will need to conduct a thorough study to determine the feasibility of consolidating all transmission systems operator functions into a single "Transport" MOS. The training would be based primarily on theory, principles and concepts which can be applied to any transmission medium (current or future), rather than individual systems. Finally the workgroup indicated a desire for MOS 31U/25U to retain the Retrans operator function (at least within the maneuver units).

Second workgroup: ASID9, Battlefield Spectrum Manager

SFC Bruce Nixon, Senior Career Manager for 31W and the Battle Field Spectrum Management Additional Skill Identifier, D9, opened the discussion workgroup concerning a review of ASI D9, Battlefield Spectrum Manager, the topics of discussion were:

Inexperienced spectrum managers at Joint Task Force and Coalition Command levels. One solution explored was to look at making the D9 course available at the



BG Janet A. Hicks touches base with conference members at the NCO Workshop. Members participated in workgroups discussing many concerns for the Regiment.

sergeant (P) level with a prerequisite that the NCO have successfully graduated Basic Noncommissioned Officers Course.

Another concern identified by the workgroup was that ASI management does not provide pin point tracking for progressive levels of experience. The group's recommendation was to explore a means to improve management and indicate varying levels of experience through the use of Skill Qualification Indicator.

The group identified a need for a web based exportable package for refresher training to assist the Spectrum Soldier population.

A final topic was that NCOs who complete the course are not assured they will be assigned as spectrum managers (we have met the enemy and he is us). The Army spectrum management office offered to assume responsibility for the management of these Soldiers, but much detail would have to be worked out with Human Resource Command for that to occur.

Third workgroup: Data Packages

A third workgroup discussed the topic of Data Packages and it was led by Curtis from the NCO Academy. The workgroup came up with the following:

There were indicators which showed a complete Data Package Team with Transport should be made up with current MOSs 31L, 31W and 74B. The switch team would consist of MOSs 31F, 31W with the 31S as the transport MOS.

There was lively discussion concerning the skills necessary for

the data team. The group recommended the following skill sets: Signal flow, routers, client servers, switches and hubs. For Information Assurance based software the group recommended: Symantec firewalls (Level II), Cisco IOS (operating system) – feature Set, Real Secure (Version 8). For the hardware concerns Cisco PIX (firewall/Internet security system) was recommended. Other skills recommended were encryption devices, multiplexing, fiber/cable and wire splicing, audio visual distribution: Predator/Global Broadcasting System feed, SMU (switch multiplexing unit) – Basic Knowledge and Network Management.

The working group determined a requirement to standardize the equipment, as polled by the field represented in the workgroup.

All of the above ideas require further study and analysis with an eye to the future force. This process will ensure our solutions are the right ones for the Army and our Signal Soldiers. With events of the 31st Symposium under our belts and as we prepare for a new year we must turn our eyes to the future and always remember that this Regiment is not based on equipment or technology but on the Signal Soldiers, NCOs and Officers who unite us as a force. The equipment is a vehicle we use to accomplish the mission but without the Signal Soldiers, we would never be as successful as we are. They provide the spark which ignites the imagination and accomplishes the impossible!

–PROPATRIA VIGILANS

CSM Terry is the post command sergeant major, Fort Gordon, Ga. CSM Terry has held every leadership position from team chief to CSM. He has deployed to real-world situations three separate times including: Hurricane Andrew in Homestead, Fla., and two deployments to Somalia during Operations Restore Hope and Continue Hope.

His assignments have included 124th Signal Battalion, Fort Carson, Colo.; U.S. Army Recruiting Station, Davenport, Iowa; 1/36th Field Artillery., Augsburg, Federal Republic of Germany; U.S. Army Electronics Proving Ground, Fort Huachuca, Ariz.; 125th Signal Battalion, Schofield Barracks, Hawaii; 10th Signal Battalion, Fort Drum, N.Y.; 142nd/124th Signal Battalion, 16th Signal Battalion, and 3rd Signal Brigade, Fort Hood, Texas and 516th Signal Brigade, Fort Shafter, Hawaii.

DEFINITIONS

Cisco IOS – Cisco operating system
Cisco PIX – Cisco firewall (Internet security system)

ACRONYM QUICKSCAN

ASI – Additional Skill Identifier
BNCOC – Basic Non-commissioned Officers Course
CECOM – Communications Electronics Command
COCOM – Coalition Command
IA – Information Assurance
JCSE – Joint Communications Support Element
MOS – military occupational specialty
NCO – Non-commissioned Officers
NETCOM – Network Command
SMU – switch multiplexing unit
VI – Visual Information



Battalion Commanders Forum re-born in 2003

by Olen L. Kelley

It was an idea that had been laid to rest and this year re-born. The Signal Regiment's yearly Signal Symposium held its first Battalion Commanders Forum in awhile.

Battalion commanders have always been invited and have attended the Signal Symposium but have done so melding with the masses and therefore unheard as a group. This year they got a voice; a chance to talk and to discuss information that affected personnel, training and operations.

It started early in the year with emails to BG Janet A. Hicks from battalion commanders asking to be included in the Signal Symposium. Hicks saw the merit to the idea and the forum idea became a reality.

Guidance was direct and pertinent - market the event and ensure battalion commanders a venue to discuss, unencumbered, their concerns. Emails flew letting all battalion commanders know of the upcoming event and soliciting input on topics they would like to discuss.

From this an agenda was developed that included briefings and discussions on Signal Personnel Update, Task Force Networks and the Web Based Information System.

"Build it and they will come," and like the in the movie *Field of Dreams* they came. We anticipated twenty attendees. When the forum started they were thirty-three in attendance. Current, past and future battalion commanders were on hand to participate and discuss their issues, concerns and solutions.

As important as it was to provide an opportunity to meet with old acquaintances and develop new contacts, broadening a knowledge and experience foundation for everyone was a primary goal of the forum.

The forum began with remarks



by Hicks who laid the foundation as to what the forum hoped to accomplish as well as highlight key issues affecting the Signal Corps.

Phil Sines, Office Chief of Signal, followed up with a Signal Personnel Update. This brief quickly elicited discussion ranging from Mapping military occupational specialties for current unit needs, to Advanced Individual Training, to 24 and 53 functional areas requiring Signal experience.

LTC Barry Hensley then demonstrated the Web Based Information System. The system's premise is a centralized personnel and mission tracking database that would save time in report generation and provide the leadership instant access to critical information. The demonstration highlighted how time can be eliminated from the gap between information gathering and decision-making.

LTC Nello Thomas, Directorate of Combat Developments, ended the day with an update on TF Networks. The discussion ranged from how Joint Requirements Committee and federal acquisition laws impact this effort to the program's current efforts and status. Though the forum had officially ended, discussion and interaction continued well afterwards as email addresses were exchanged and sidebars clarified issues.

This re-born idea is well on its way through infancy as the Battal-

ion Commanders Forum laid a foundation where leadership can come together to discuss issues, imbed new ideas and think about the future of our corps. As this event builds on its success two key accomplishments stood out as its pillars. The forum provides a battalion commander to focus on critical issues facing the Signal Corps earlier in a command tour - key for our future senior leadership. And also the forum allows a venue for Signal Battalion Commanders to *voice* their concerns, solutions and most importantly their ideas.

All battalion commanders must put next year's Signal Symposium on their calendar now - it is always the first full week after the Thanksgiving week - and try to attend. Work will be ongoing to capture key issues and information with the intent of distributing it to all commanders regardless of attendance. This was a great first step and it's up to all of us to keep the fires burning.

LTC Kelley is the commander of the 56th Signal Battalion at Fort Gordon, Ga.

ACRONYM QUICKSCAN

AIT - Advanced Individual Training
JROC - Joint Requirements Oversight Committee
MOS - Military Occupational Specialties
TF - Task Force

IA Workshop focus: ensure secure transmission

by PVT Armando Monroig

The Information Assurance Workshop was held Dec. 2 at the 73rd Ordinance Battalion conference room as part of Signal Regimental Symposium week activities.

The workshop set the stage to discuss information assurance in today's military.

"The name itself kind of implies what it means," said Randal McNeil, chief of Information Assurance Division at the U.S. Army School of Information Technology. "Assuring that your information is there."

McNeil said this includes cryptography, network security and technology and policies that the Army and Department of Defense are implementing.

He said it is all about security of information.

McNeil said anyone who has an interest in Signal or communications was present at the IA workshop, adding that IA is an integral part of most jobs in today's work force, especially the military.

"People wouldn't know how to do their jobs anymore without e-mail or Internet," said McNeil.

He explained it is imperative the military's information be protected and kept secure so the wrong people won't be able to access it. The goal is to keep the wrong people from getting into, attacking or destroying information that is critical to departmental security.

McNeil said IA is a worldwide issue and that all services are involved. He said the National Security Agency is also involved with this issue and had representatives in attendance, discussing wireless security.

"One of the reasons we did this was to keep attention on it (IA issue)," said McNeil. "IA right now is one of the most critical issues in



BG Janet A. Hicks, sharing with the IA Workshop members, said it is imperative we have a network which is big enough, dependable enough and impenetrable.

networking and communications everywhere. We can't function without it anymore."

He cited the recent power grid blackout in the Northeast as an example of the dependence on technology and networking in order to function on a day-to-day basis.

"It's a hot topic right now," he said.

McNeil said his division trains Department of the Army personnel as well as the other branches of the military and federal agencies. The main offices are located here. He said they have 11 mirror sites throughout the world in places like Germany, Korea and Hawaii.

Among the speakers was BG Janet A. Hicks, U.S. Army Signal Center and Fort Gordon commanding general, who took time to visit the workshop.

Hicks spoke of how all branches of the military need to work together as a team, to ensure information assurance is addressed.

She said it is imperative we have a network which is big enough, dependable enough and impenetrable.

"This network will enable combat system support on the battlefield, be self-healing, self configuring," said Hicks. "We want this network to be able to do SIPRNET (Secure Internet Protocol Router Network), NIPRNET (Non-secure Internet Protocol Router) and things like that in the battlefield."

She said everywhere we go we need that network, whether it is at a fort in the United States or in the Middle East, and we need that network to securely deliver information.

"Now, I'm not sure we can reach this," she said. "I hope you think we can. But if that's not our goal, then we will never be impenetrable."

"IA is a booming industry," she said. "It is a mandate, a compelling need."

One of the speakers at the workshop was COL Jean Tyler, director of the Defense-wide Information Assurance program at the office of the Secretary of Defense, who discussed the program and what it does to those in attendance.

"We are beginning to see some synergy in the Department of Defense and really bring about IA as a functional combat multiplier," said Tyler.

He said it is an integral part of the military and its functionality.

Tyler explained it is a work-in-progress; a constant journey working toward insuring that things are being done correctly as far as IA is concerned.

He said the IA race is being won but there are many hurdles ahead.

"We stopped the F22 fighter program in its tracks because it wasn't IA compliant," said Tyler.

Tyler said he had the authority over the weapons system through congressional mandate. He explained that the program was halted



BG Janet A. Hicks shared with the IA workshop during the Symposium: "IA is a booming industry," she said. "It is a mandate, a compelling need."

until it became IA compliant.

"One of the biggest problems we have in the bigger IT arena: the difference between weapons systems and IT systems," said Tyler. "We will never get through this centrality if we can't solve that problem."

Tyler explained that IT and weapons systems are one in the same.

He said one of the biggest variables in the IA issue is that technology is changing rapidly and is very difficult to keep up with.

"We're buying old stuff," he said. "We need to get ahead of that curve and get that technology into our stream quicker."

Another one of the hurdles that must be overcome is policy, said Tyler.

"DoD policy takes a minimum of 24 months (for approval)," he explained. "There's 10,000 people in D.C. (District of Columbia) who can say no."

PVT Monroig is a staff writer for

The Signal newspaper, Fort Gordon. He recently completed Advanced Individual Training at Fort Meade, Md. Monroig hails from Naples, Fla.

ACRONYM QUICKSCAN

D.C. – District of Columbia
 Dod – Department of Defense
 IA – Information Assurance
 IT – Information Technology
 NIPRNET – Non-secure Internet Protocol Router
 SIPRNET – Secure Internet Protocol Router

Signal Regiment reunites at Symposium

by SSG Kelly McCargo

More than 300 Signal Corps soldiers attended the Signal Corps Regimental Reunion at the Gordon Club Dec. 4.

Signal officers and Non-commissioned Officers throughout the Army used the evening to reminisce and socialize with past acquaintances.

"You spend so much time chewing the dirt with these people, then you have to part ways - this (reunion) keeps the bonds of camaraderie open," said SFC James Quentin, 121st Signal Battalion, Kitzingen, Germany.

Spotting his previous company



commander, Quentin made his way across the crowded room to say hello.

"This was one of my platoon sergeants in my old company," said CPT Neil Khatod, Directorate of Combat Developments at Fort

Gordon. "It's a thrill to see some people that I haven't seen in years."

The event was especially profound given the extensive military deployment requirements.

"It's a surprise seeing the growth and maturity of some of the soldiers you once worked with," said 1SGT Christopher Cousins, 252nd Signal Company. "It feels good that they still remember you with all of the things currently going on in the Army."

SSG McCargo is with the 93rd Signal Brigade Public Affairs at Fort Gordon, Ga.

OIF lessons learned shared

Panel shared issues they dealt with in Iraq, answered questions

by Pvt. Armando Monroig

The conference held at Alexander Hall Dec. 4 examined lessons learned from Operation Iraqi Freedom. A panel of officers discussed everything from operational tactics and strategy, to Soldiers' morale and welfare in the Middle East and their families' morale in the states.

Members of the panel included COL Brian Hurley, 11th Signal Brigade, LTC Michelle Walla, 501st Signal Battalion commander, 101st Airborne Division (Air Assault), LTC Joe Brendler, 123rd Signal Battalion commander, 3rd Infantry Division, LTC Brian Moore, 17th Signal Battalion and LTC John Schliefer, 124th Signal Battalion, 4th Infantry Division.

Each spoke of the issues they encountered while assigned to Operation Iraqi Freedom and answered questions from the audience ranging from new equipment to Soldiers' success, said LTC David O'Neal, chief of the Materiel Requirements Division, who helped organize and host the event.

O'Neal served 21 months overseas with all of the presenters, first during Operation Enduring Freedom then in OIF.

He was deployed 599 days, first to Uzbekistan just after the Sept. 11, 2001, terrorist attack and stayed until Afghanistan fell - then on to Camp Doha where he was on the C-6 battle staff for a year, then to Camp Arifjan where he was the C-6 officer-in-charge.

He explained this panel was held because of interest in what happened in OIF.

O'Neal said he had received numerous requests for a conference about OIF so everyone could hear the issues that these panelists had to deal with, ask questions and learn.

Walla gave a briefing on what



Numerous requests were received by LTC David O'Neal, chief of the Materiel Requirements Division, who helped organize and host the panel session on lessons learned in OIF.

she expected of the platoon leaders, platoon sergeants and company commanders in regards to her experiences in OIF. Her slides were geared towards the leader and what kind of things they had to worry about in taking care of their Soldiers. She highlighted items that make great Soldiers into leaders of Soldiers/communicators.

"As the division G6, I had to stay inside the decision cycle of my division commander so I could anticipate where our Signal assets had to be located in order to provide the division with flawless voice and data communications," said Walla.

In addition to organizing where communications will be located Walla said it was her job to make sure communication lines were open.

"As the Signal battalion commander, I reinforced those simple Signal characteristics of a good network.... redundancy, flexibility, initiative and planning on the move," Walla explained. "These were all needed to install and maintain a

worthwhile network for the war-fighters."

She said she enjoyed participating in the OIF conference and Signal Symposium week.

"This was the most rewarding time I spent at Fort Gordon during this Signal Symposium. Anytime I get to spend time with leaders and Soldiers, it is worthwhile," said Walla. "These are the Soldiers and leaders of the future and they will proudly carry our tradition of the 'communicator on the battlefield' for years to come."

PVT Monroig is a staff writer for The Signal newspaper, Public Affairs Office, Fort Gordon, Ga.

ACRONYM QUICKSCAN

OIF - Operation Iraqi Freedom
Note: (All correct spellings) Camp Araifjan, Arefjan, Afrikan and Urayfijan located in Kuwait

Multifaceted RC Workshop assists in meeting challenges to get the future right

by MAJ Stanley A. Schrader Jr.

Directorate of Training, Systems of Integration Division

The Reserve Component Workshop at the 31st Annual Regimental Signal Symposium numbered among the most ambitious and informative of the entire week. The two-day workshop included two mini-workshops, two executive sessions, 14 presentations, a general officer luncheon and the Annual Reserve Component Barbeque.

Mini-workshops took place Monday of Symposium week. A Schoolhouse-Proponent Mini-Workshop allowed attendees to glean the latest information available on officer, warrant officer, enlisted issues and training. For the first time, a technical mini-workshop provided opportunity for officers and non-commissioned officers to discuss and share new equipment operations efforts and methodologies within various commands.

The General Officer Luncheon on Monday kicked off the RC Workshop enabling the Chief of Signal and deputy commanding general to have an informal meal and some light discussion at the Gordon Club before moving to the Reserve Center. There BG Janet A. Hicks gave opening remarks to a standing-room-only audience of RC commanders and leaders. In attendance were the deputy CGs from both the 311th and 335th Signal Commands, the Headquarters Department of the Army deputy Communications Information Officer/G6 and the brigade commanders from the 142nd, 228th, 261st and 359th Signal Brigades.

The Army National Guard Tactical Signal Advisory Committee and the Army Reserve Executive Steering Committee met Monday and



(Left) COL Chris Kemp, senior Signal Active, Guard and Reserves commander from Forces Command, presented a shadowbox filled with the flag and coins of excellence to retired COL J. Derrell Lockaby, at the Reserve Component Barbeque held during Symposium week. (Below) RC members and families enjoy the BBQ celebration.



Tuesday. The TSAC and Army Reserve Executive Steering Committee purposes are to discuss issues and develop courses of action relevant to Signal units in the RC and provide feedback to the director, Army National Guard and chief, Army Reserve respectively.

Fourteen presenters provided overviews and discussion on a number of topics including Signal Transformation, Operation Iraqi Freedom lessons learned, new equipment disposition, Total Army Analysis, Homeland Defense and Assignment Oriented Training/ University of Information Technol-

ogy. The Signal Center director of Combat Developments, all three Training and Doctrine Command Systems Managers, the G-6s for both Forces Command and United States Northern Command (Homeland Security), the Communications Electronics Command readiness director, the HQDA G-3 and G-8 were all represented or individually present and provided presentations. Two Operation Iraqi Freedom lessons learned discussions by COL Charles Nichols, deputy chief of staff for Operations and Plans, 335th Signal Command, Army Reserve, and LTC Heather Meeds, commander, 151st



RC Soldiers, retired and active, shared good-natured fun, a few war-stories and some darned good barbeque at the American Legion Post on Highland Avenue Monday night of Symposium week.

Signal Battalion, South Carolina Army National Guard were highlights of the workshop. The finale of the workshop was a two-hour question and answer discussion with BG Gregory J. Premo, DCG of the Signal Center.

Monday night, the RC hosted its annual barbeque at the American Legion Post on Highland Avenue, Augusta, Ga. The atmosphere was

one of camaraderie and revelry as officer and noncommissioned officer, active army and RC Soldiers shared good-natured fun, a few war-stories and some darned good barbeque to boot.

This was also the first RC Workshop to have vendors present. Although, nothing compared to the display tent on Chamberlain Avenue, visits from Ultra-Electron-

ics, Codem Systems and the Unified Command Suite of the Atlanta-based Weapons of Mass Destruction Civil Support Team garnered plenty of attention from workshop attendees.

Overall, this year's workshop was arguably the best ever. Without question, the Reserve Components are doing their part in, "Meeting Today's Challenges" and "Getting the Future Right."

MAJ Schrader is a Title-10 Active Guard Reserve officer attached to the Signal Center as division chief, Systems Integration Division, Directorate of Training at Fort Gordon.

ACRONYM QUICKSCAN

CIO – Communications Information Officer
DCG – Deputy Commanding General
HQDA – Headquarters Department of the Army
RC – Reserve Component
TSAC – Tactical Signal Advisory Committee

Four Distinguished Members of the Regiment honored at the 31st Symposium

by Susan Wood and Janet McElmurray

FORT GORDON, Ga. – The 31st Signal Regimental Symposium was highlighted with a ceremony honoring four new Distinguished Members of the Signal Regiment in December 2003.

BG Janet A. Hicks, Chief of Signal, inducted newly-retired David Borland, former deputy to the Army's chief information officer. Borland demonstrated outstanding team building and built a coalition from government and industry which lead to a remarkable recovery of the Pentagon's communications systems following the Sept. 11 attacks.

Hicks also inducted retired CWO 4 James P. Eury who served 40 years in support of the Signal Regiment and the U.S. Army, with 30 years of active



service earning Army Signal Command/Network Command Commander's Maintenance Excellence Award for five consecutive years, an unprecedented achievement.

Finally Hicks inducted retired MG Charles G. Suttin Jr. who served more than 30 years of active service including the White House Communications Agency and Desert Storm. Suttin held many key command and

staff positions.

Honored as a new Distinguished Member, but unable to attend the ceremony, was retired CSM Kermit D. Short, who continues to serve the military at the Department of Veterans Affairs in Illinois. In his years of service he garnered many awards and achievements in support of Army communications and the Signal Regiment.

Further information on the new Distinguished Members follows:

David Borland

David Borland served as the deputy to the Army's chief information officer (CIO/G-6). His position routinely required making decisions that shaped the Army as he served as a critical link between industry and the field. Borland held this position (formerly known as the vice Director



Distinguished Members honored for 2003 by BG Janet A. Hicks, Chief of Signal, in ceremony during the Symposium are pictured from left to right: retired MG Charles G. Sutton Jr., retired CWO 4 James P. Eury and David Borland. Chief of Staff Bernie E. Kulifay Jr. stands in the background.

of Information Systems for Command, Control, Communications and Computers) from July 1994 to November 2003. Dave Borland has been the catalyst for change and growth within the CIO/G-6 and with the Army over the past several years.

In the wake of the terrorist attacks, Borland spearheaded the transformation of the CIO/G-6 staff and aided in the establishment of a new subordinate command, Network Enterprise Command, as part of the headquarters, Department of the Army reorganization. Borland has led the Department of Defense-wide effort to investigate innovative solutions to information assurance, network defense and security challenges facing DoD and the government in general.

A superb team builder, Dave Borland effectively dealt with both the government and private sectors with ease and grace. Borland's exceptional ability to build a coalition from government and industry led to a remarkable recovery of the Pentagon's communications systems following the Sept. 11 attacks. Borland also demonstrated outstanding team building skills by fostering collaboration between the CIO/G-6 and the National Science Center to

reach students from around the country and develop a new generation of young people interested in science and technology.

Dave Borland is a dynamic and caring leader who motivated, coached and mentored members of the Army's C4 community. His impact went far beyond the walls of the Pentagon and will serve as an example for the Signal Regiment for many years to come.

Retired CSM Kermit D. Short

Retired CSM Kermit D. Short entered the United States Army on April 21, 1965, in Chicago, Ill. He received his basic training at Fort Knox and completed Advanced Individual Training at Fort Gordon.

His military assignments include tours of duty in 35th Signal Brigade, Fort Bragg; 32nd Signal Battalion, Frankfurt, Germany; 78th Signal Battalion, Fort Lewis; 972nd Signal Battalion, 9th Infantry Group, Republic of Vietnam, 82nd Signal Battalion (Airborne), Fort Bragg; 8th Signal Battalion, Bad Kreuznach, Germany; 50th Signal Battalion (Airborne), Fort Bragg and 1st Battalion, 1st Air Defense Artillery, Wildflecken, Germany.

He served as the command



Also honored as a Distinguished Member, but unable to attend, was retired CSM Kermit D. Short.

sergeant major for 82nd Signal Battalion, Fort Bragg; 122nd Signal Battalion, 2nd Infantry Division, Republic of Korea; 82nd Airborne Division Support Command, 82nd Airborne Division, Fort Bragg and the 35th Signal Brigade, Fort Bragg. Short's awards include the Legion of Merit, the Bronze Star with one oak-leaf cluster, the Meritorious Service Medal with five oak-leaf clusters, Army Commendation Medal with one oak-leaf cluster, the Army Achieve-

ment Medal, the Good Conduct Medal (10th award), Vietnam Service medal with six campaign stars and Vietnam Cross of Gallantry, the Humanitarian Service Award, the Armed Forces expeditionary medal Southwest Asia service medal and Kuwait Liberation Medal for Saudi Arabia and Kuwait.

His special skills include the Master Parachutist Badge, the German Parachutist Badge and the Honduran Parachutist Badge. He currently works for the Department of Veterans Affairs for the state of Illinois, continuing his commitment to Soldiers and their families.

Retired CWO 4 James P. Eury

Retired CWO 4 James P. Eury has served the Signal Regiment and the U.S. Army for the past 40 years in many assignments, including 30 years of active service in the Army.

He currently serves as the logistics division chief (S-4) for 302nd Signal Battalion, 21st Signal Brigade, Fort Detrick, Md. His enlisted assignments include 201st Signal Company, 32nd Signal Battalion, Germany; and 426th Signal Company, 35th Signal Group, Fort Bragg.

After appointment to warrant officer, he served as the battalion maintenance officer in 25th Signal Battalion and 82nd Signal Battalion (Airborne), Fort Bragg and as the brigade maintenance officer in the 1107th Signal Brigade, Fort Ritchie and 1108th Signal Brigade, Fort Detrick, Md.

His overseas assignments include Vietnam, Korea and three tours to Germany. Two of his significant accomplishments while assigned overseas include the Commanding General's Maintenance Awards for both the 5th and 7th Corps. He is the only warrant officer to date to ever be awarded both of these awards.

After retirement from the Army in 1993, he returned to the 1108th Signal Brigade as a Department of the Army civilian staff officer in the brigade S-4. He continued to shape Army communications logistics through planning and implementation of all new equipment fielding, and acted as principal staff action officer for

all facility infrastructure projects throughout the command.

In his capacity as the 302nd Signal Battalion S-4, his responsibilities included planning, support and implementation of a broad range of logistics programs pursuant to new equipment fielding of DoD C4 systems, including Satellite Command upgrades and Army transformation initiatives such as teleport, that will provide SATCOM crossbanding capabilities to joint combatant commanders and the deployed warfighter.

He was awarded the Army Chief of Staff's Award for Supply Excellence in 2000, the Forces Command Commanding General's Award for Maintenance Excellence for three consecutive years, and the Army Signal Command/NETCOM Commander's Maintenance Excellence Award for five consecutive years. His achievements in support of Army communications and the Signal Regiment are remarkable and unprecedented.

Retired MG Charles G. Suttin Jr.

Retired MG Charles G. Suttin Jr. entered the Army from the U.S. Military Academy with a bachelor of science degree and was commissioned as a Signal officer in 1967. He later received a master of science degree in electrical engineering from Stanford University. His military schooling includes Airborne and Ranger Schools, Signal Officer Basic and Advanced Courses, College of Naval Command and Staff and Army War College.

In more than 30 years of active service, Suttin held an array of key command and staff positions. His initial assignment was with 3rd Battalion, 325th Airborne Infantry, 82nd Airborne Division, as the battalion Signal officer. During his tour in Vietnam he served as the 1st Brigade Signal officer. After completing the Signal Officers Advanced Course, Suttin served as an assistant professor of electrical engineering at the U.S. Military Academy.

In 1979 he was assigned to the White House Communications Agency, where he served as unit executive officer and deputy operations officer. Other command positions include command-

ing general of 5th Signal Command, commander of 141st Signal Battalion, and commander of 11th Signal Brigade.

In December 1990, during Desert Storm, he assumed command of the newly formed 6th Theater Signal Command, a position he held until May 1991 when he assumed duties as the deputy commander, 5th Signal Command. He then became commander in 1993.

He assumed duties as the commanding general of the now inactivated U.S. Army Information Systems Command in July 1995. ISC was re-designated the Army Signal Command on September 1996. In addition to commanding ASC, he served as the CIO/G6 on the FORSCOM staff. Suttin retired in 1999.

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 Armed Forces Communications-Electronics

ACRONYM QUICKSCAN

ASC – Army Signal Command
CIO – Command Information Officer
DISC4 – Director of Information Systems for Command, Control, Communications and Computers
DoD – Department of Defense
FORSCOM – Forces Command
NETCOM – Network Command
SATCOM – Satellite Command

Task Force Network formed

Symposium workshop sets stage

by LTC Nello Thomas

With additional input from: LTC John Defalco, chief, Force Requirements Division, Signal Center Directorate of Combat Developments; MAJ Greg Grzybowski, chief, Automated Systems Integration Branch, Signal Center Directorate of Combat Developments; Robert Schenk, U.S. Army Communica-

tions-Electronics Research Development and Engineering Center; and MAJ Julian Williams, TSM Tactical Radio.

BG Janet A. Hicks led the Chief of Staff of the Army Focus Area "The Network" upon receipt of the task from Training and Doctrine Command. This article recaps the efforts of the Task Force. It addresses the mission analysis conducted, presents the Task Force's charter, discusses the method employed to respond to the task, and provides an initial insight into the forthcoming White Paper that details the Task Force's findings.

On Sept. 11, 2003, the new Army Chief of Staff GEN Peter Schoomaker identified fifteen topics he would immediately focus upon for exploration and

improvement. These 15 CSA Focus Areas were:

- The Soldier;
- The Bench;
- Modularity;
- Joint Expeditionary Mindset;
- Active Component/Reserve Component Balance;
- Unit Manning;
- Combat Training Centers/ Battle Command Training Programs;
- Leader Development and Education;
- Army Aviation;
- Installations as Flagships;
- Current to Future Force;
- Resource Processes;
- Strategic Communications;
- Authorities, Responsibilities and Accountability;
- and The Network.

In designating these focus areas, the CSA's clear intent was to move the Army quickly in the right direction. The goal was to increase the joint relevance and readiness of our operational and institutional forces, and enhance our ability to

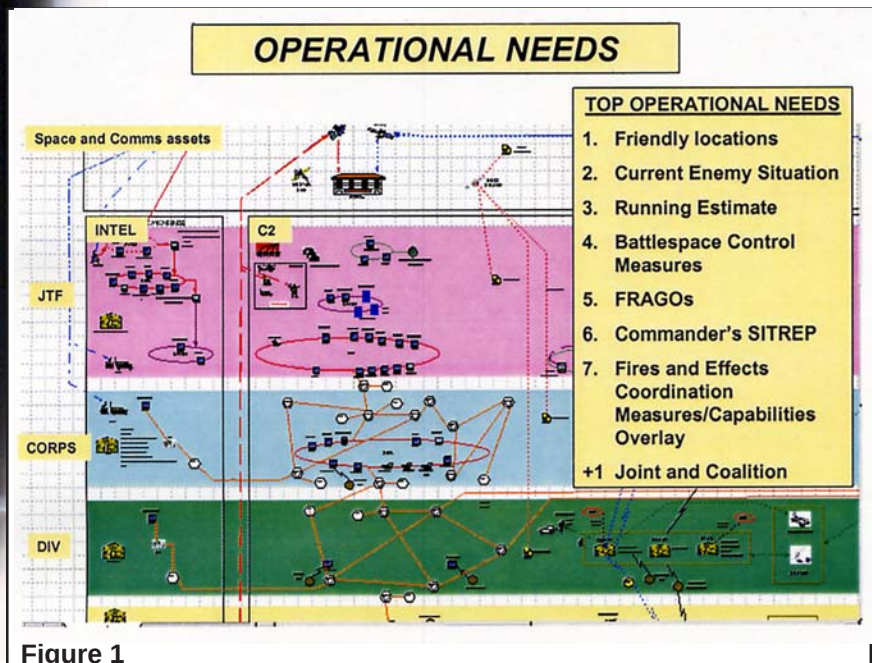


Figure 1

fight wars and win the peace.

The commanding general of TRADOC was designated as the lead agent for nine of the 15 immediate focus areas, including The Network. A warning order was issued to Hicks, the Signal Center commanding general, to be prepared to form Task Force Network.

Hicks immediately began assembling a team, calling upon expertise throughout the Army, joint services, industry and retired military experts.

The first step was to conduct a mission analysis that would firmly establish the team's mission, purpose, method and end-state to meet the CSA's intent. The following mission analysis was approved by the commanding general of TRADOC in late September:

- **Mission:** TF Network will analyze current networks from a top-down perspective, and develop recommendations to increase Battle Command capability for the Current and Future Forces in Joint, Inter-Agency, Multinational full-spectrum operations. Additionally, TF Network must identify baseline capabilities required for the Army to be relevant in a JIM environment, recommend a single Army lead for network development and develop a re-prioritization of network developments that will accelerate improved capabilities to the Current Force.

- **Purpose:** Recommend an accelerated network solution that enables Battle Command in a network-centric, JIM, full-spectrum environment.

- **Method:** Form a cohesive team at Fort Gordon to analyze the network from JIM perspective. The team will consist of reps from Defense Information Systems Agency, Joint Forces Command, Battle Command Battle Lab Combined Arms Center, Network Command, Research Development and Engineering Command, Army and other Joint Services and agencies. The team will analyze the Network from a top-down perspective to exploit a rapid

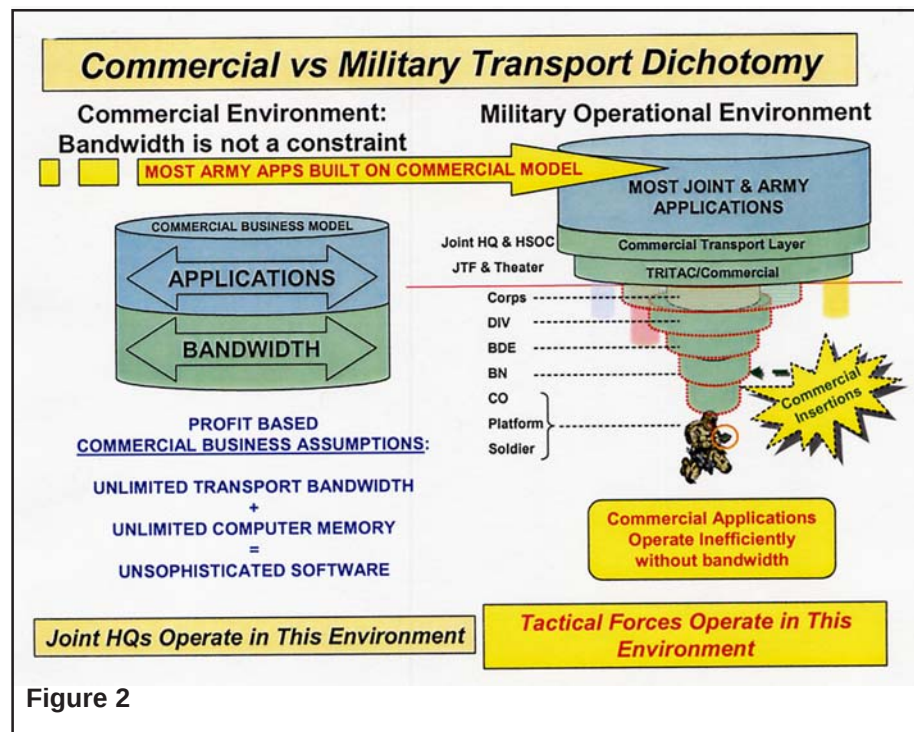


Figure 2

technology infusion to increase the Battle Command capabilities.

- **End State:** Provide to CG, TRADOC a recommended solution which provides a network that delivers enhanced Joint Battle Command capabilities to the Current Force.

- Recommend baseline C4 capabilities.
- Define how to exploit rapid technology insertions wherever and whenever possible.
- Identify a single Army lead to be responsible for develop employing, and protecting one Joint-capable information Network.
- Assist in developing new business practices that will put tomorrow's Information Technology into the hands of Warfighters today.
- Recommend adjusting current force fielding by changing from a bottom-up to a top-down methodology.

With this guidance in hand, the Task Force stood up and began operations in a classroom area at the Signal Center. Members of the broad DoD and industry Information Technology community were sum-

moned, and work from the outset proceeded at a feverish pace to formulate Task Force Network initial findings within 30 days.

The Task Force identified four essential tasks that were critical to a logical way ahead. These essential tasks were:

- *Collaborate with Joint/Office of the Secretary of Defense Community on Network Development:* The Task Force must assist Joint/Department of Defense in developing a Baseline Capabilities/Requirements mandate (Secure Internet Protocol Router, Non-Secure Internet Protocol Router, Joint Worldwide Intelligence Communications System, Video, Voice, Data and Collaboration. Additionally, lessons learned from Operation Enduring Freedom, Operation Iraqi Freedom and Stryker Brigade Combat Team experiences must be injected into the process.

The Task Force must coordinate with TRADOC and Joint Forces Command to ensure Joint Compliance. Finally, the Task Force must consider all existing Joint and Army network strategies, assessing their applicability and any modification/merger of those strategies into a

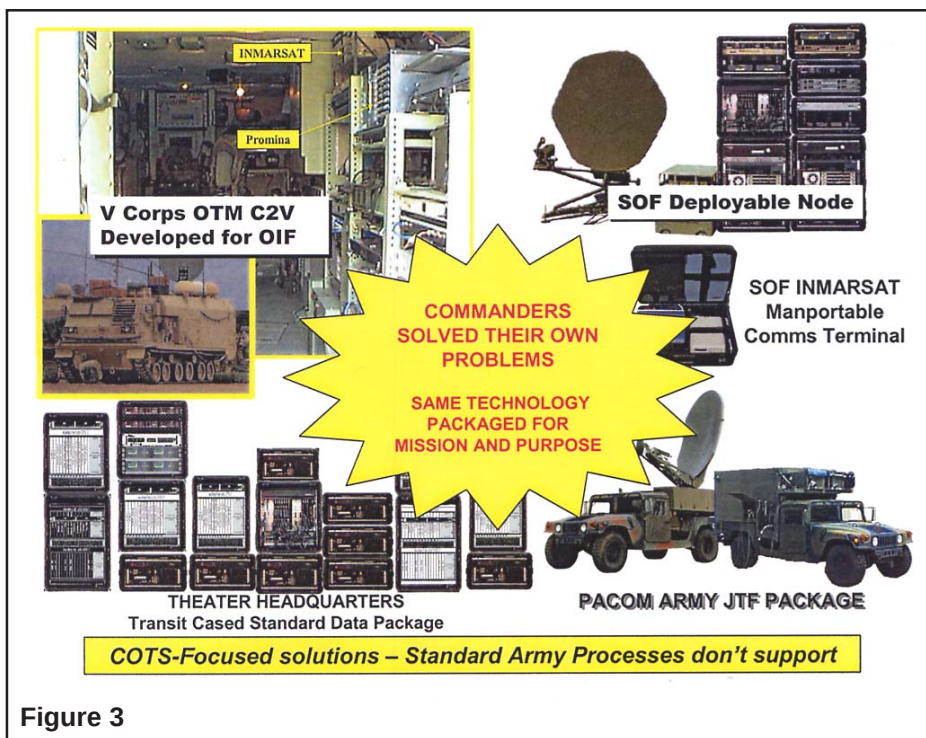


Figure 3

single approach.

- *Accelerate Battle Command Capability as feasible to Current Force* by defining how to exploit rapid technology insertions wherever / whenever possible and assisting development of new business practices that will put tomorrow's IT into the hands of the Warfighter today.

- *Accelerate Future Network Capabilities:* The Task Force must recommend adjustments to focus on Network and recommend what network capabilities for the future should be accelerated to current force.

- *Clarify Network Oversight:* The Task Force must recommend a construct for an Army lead for network development and recommend an Enterprise Investment Strategy.

The Task Force divided into four workgroups to address each essential task. Each workgroup included representatives from the following communities: warfighting users; requirements developers; research, development and acquisi-

tion organizations; service provider organizations; defense and joint level organizations. Additionally, workgroup products were vetted with Senior Mentors.

The Transport Workgroup had the responsibility to address the ability of the network to link users and to handle the required traffic load, determine gaps and recommend Network improvements for the current and future force. The workgroup determined the transport services (voice, data, imagery and video) needed at each echelon, during each stage of the battle. The services were captured on a spreadsheet and mapped to Army echelon. The workgroup then conducted a cross-walk of the analysis for voice, data and video transport services to the operational requirements documented in Operation Iraqi Freedom mission threads.

This cross-walk readily identified the gaps in current network connectivity and in the ability to extend services to the required echelon. The cross-walk became the basis for future operational architecture development. After a thorough examination of the requirements, current strategies, force structures

and potential technical insertions available today, the workgroup developed a strategy to satisfy as many of the requirements as were deemed possible.

The Applications Working Group examined information applications currently being used to baseline the current mix of applications used to conduct operations. The workgroup conducted a bandwidth study focusing on the impact of applications on existing transport infrastructure. The workgroup also examined pre-existing Network Operations work across the Army and assessed that work with regard to ongoing Joint initiatives. The outcome charted technical definitions necessary to measure success of existing and future applications with regard to NETOPS.

It is easy to see that solving the problems of the Application Layer of the Army Network is an immensely complex undertaking requiring significant time, dedication, focus, energy and commitment. It will require combat developers, materiel developers and operators to look at the Army in a new holistic way.

The Business Practices Workgroup analyzed current business practices to determine the best way to procure future systems. Throughout our research we reviewed the process of technology insertions used during Operation Enduring Freedom and Operation Iraqi Freedom.

The workgroup examined several recent instances where rapid technology insertion techniques were used to address critical, limited scope capability shortcomings. Examples included outfitting the Command and Control Vehicles in V Corps with commercial communications components and the accelerated fielding of Blue Force Tracking.

The Collaboration and Single Network Lead Working Group was charged with defining network leadership roles for the Army. The workgroup reviewed Congressional

and DoD mandates, focusing on The Information Technology Management Reform Act of 1996, General Order #5, as signed by Secretary of the Army on Aug. 13, 2002, Welch Panel recommendations, and United States Strategic Command ongoing efforts with regard to Joint and Global Network Operations and Computer Network Defense.

Official findings of Task Force Network are now being staffed, and will be presented in a White Paper tentatively titled, *Network Support to Army Warfighters: Effective Use of Information Technology for Current and Future Battle Command Dominance*. The following initial insights will be included in the White Paper:

- **Collaboration and jointness:**

Joint information solutions must start at the first stages of system development, training and planning. The Army can't develop Army-only solutions, then expect Army forces to be relevant in the joint fight. The Army must "drive the bus" in shaping JFCOM's/ Joint Staff's baseline capabilities definition for what it means to be "joint." TRADOC Futures Center is the Army injection point for this effort.

- **Acceleration of Battle**

Command: A parallel effort led by the Combined Arms Center and the Army G3 to prioritize existing Army Battle Command System-related programs resulted in a Battle Command "good enough" solution. TF Network endorsed this solution for implementation. Further, we stated that the Army must standardize applications on today's C2 applications "menu" and continue to promote the tools needed for effective network management and efficient use of bandwidth. The Army must adopt a NETOPS strategy for integrated Networks and Battle Command applications (Networthiness).

- **Accelerate Future Network:**

Although perhaps intuitively evident, TF Network documented the fact that huge data requirements in the joint/ garrison world simply will not fit on today's tactical transport

pipes. Transport capabilities inevitably become constrained as we move from fixed strategic infrastructure towards deployed mobile CPs and finally to the individual soldier. New transport solutions can mitigate these constraints, hence, the Army must bring future capabilities to the force today using commercial off-the-shelf technologies as a bridge. These capabilities will include Battle Command and Combat Service Support solutions down to the battalion level (with Blue Force Tracking to the Soldier level). The Network must include all battlefield functional areas and invest now to bridge capabilities to future systems.

- **Network Oversight/ "1,000-lb.**

Gorilla: The Army must have a disciplined system for determining and fielding information technology solutions to the warfighting forces. This approach would preclude the ongoing emergence of varied and sometimes non-interoperable bottom-up solutions. The TRADOC commander was recommended as the information requirements "gorilla," working hand-in-hand with the Army Chief Information Office/G6 as the authority for standards establishment, enforcement, and investment strategy. NETCOM is the go-to organization for installation, operation, protection and defense of the network. Within this construct, the Army will employ disciplined innovation. The best ideas come from the field...as they always have...but there must be a way to select the good ideas and deselect those that hinder efficient business practices.

It's no secret that significant new funding is required to achieve all these goals simultaneously. Continued investment and development of programs of record (Warfighter Information Network-Tactical, Joint Tactical Radio System, Defense Satellite Communications System, Advanced Extremely High Frequency, WGS/KaSat, Future Combat Systems, etc.) are essential. The Army must increase near-term funding for current force enhancements, but not at the expense of

future investments. Commercial network data capabilities and commercial L and Ku Band Satcom will be exploited to achieve joint network goals with least cost and schedule risk.

Leading the transformation of the Signal Regiment at the Army Staff level is LTG Steven Boutelle, Headquarters Department of the Army Chief Information Office/G6, who has tagged MG Dave Bryan to serve as the point man on the Army Staff for Signal transformational issues including how best to re-equip and reorganize the Regiment. Bryan has worked closely with the TF Network team to ensure the Signal-specific effort is synchronized with the broader context of the TF Network findings.

As we remain at war, the urgency of transformation is a constant influencing factor. The CSA has charged all Focus Area leads to produce results on a very short timeline. It is essential that the Signal community works together on this urgent task. You can expect to hear more about this effort and to be asked for your collaborative input in the coming months as products and initiatives are staffed with Signal leaders and Army major commands.

LTC Thomas is the Task Force officer-in-charge with the Signal Center Directorate of Combat Developments.



ACRONYM QUICKSCAN

ABCS – Army Battle Command System
AC/RC – Active Components/Reserve Components
AEHF – Advanced Extremely High Frequency
AWG – Applications Working Group
BCBL – Battle Command Battle Lab
BFT – Blue Force Tracking
CAC – Combined Arms Center
C2V – Command and Control Vehicles
CIO – Chief Information Office
CP – Command Post
CSA – Chief of Staff Army
CSS – Combat Service Support

DISA – Defense Information Systems Agency
DSCS – Defense Satellite Communications System
FCS – Future Combat Systems
IT – Information Technology
JFCOM – Joint Forces Command
JIM – Joint, Interagency and Multinational
JTRS – Joint Tactical Radio System
JWICS – Joint Worldwide Intelligence Communications System
NETCOM – Network Command
NETOPS – Network Operations
NIPR – Non-Secure Internet Protocol Router
OEF – Operation Enduring Freedom

OIF – Operation Iraqi Freedom
RDECOM – Research Development and Engineering Command (US Army, Aberdeen Proving Ground, MD)
SIPER – Secure Internet Protocol Router
SBCT – Stryker Brigade Combat Team
TRADOC – Training and Doctrine Command
USSTRATCOM – United States Strategic Command
WIN-T – Warfighter Information Network-Tactical
WGS/KaSat – Wideband Gapfiller Satellite/KaBand Satellite

Signal Symposium techno-expo provides two-way adventure

Online services keep Soldiers 'connected'

by PVT Armando Monroig

During Signal Symposium week, the exhibit tent, located on Chamberlain Avenue across from Signal Towers, was buzzing with energy as vendors displayed their wares to the Signal community.

More than 150 booths were set up to display new Signal technology available to today's military. Two of those were the Army Knowledge Online and the Army homepage website booths.

AKO is the Army's portal on the web, said MAJ Cedric Lee one of the individuals who manned the AKO booth during the symposium.

"Our goal here (at the Signal Symposium) is to insure that Soldiers understand what AKO is about," said Lee. "We also hope to achieve



MAJ Cedric Lee, Help Desk manager at the Fort Belvoir, Va., Chief Technology Office, explains AKO technology to J.R. Harris, a Signal Symposium visitor.

the Chief of Staff's mandate that every Department of the Army Soldier or employee has an AKO account."

He said using AKO is a safe way for Soldiers to stay in contact with their loved ones.

"It is a secure website for Army active, Guard, Reserve and retirees," said Lee.

Lee explained that AKO is a free service that gives every account holder 50 megabytes of storage space on their e-mail account. He said AKO

is divided into two areas.

The first area, the portal side, gives the user web preferences.

Lee said it allows the user to customize their own personal web page by doing such things as creating channels to get weather information, track packages and connect to their favorite websites.

"You can customize the portal side to meet your needs," he said.

The other side of AKO is the Knowledge Collaboration Center,



2003 Signal Regimental Symposium Exhibits Hall was the largest showcase of cutting-edge technology to date.



which allows users to store and share documents, said Lee.

"You can use it for business purposes or for friends and families to share documents," he said. "It's a great service."

The KCC is an application created exclusively for the U.S. Army to allow AKO users to share and collaborate on documents.

From there, Soldiers can upload and download files that will be available from any Internet connection, share files with other AKO

users, and create personal and Army Community Knowledge Centers.

They can also subscribe to knowledge centers to gain access to Army community information and search for documents using keyword searches. There is an Inside AKO tab that allows users to get additional information they might need about AKO.

Lee explained there are four Army Knowledge Management memorandums that were signed by the Chief of Staff of the Army and the

Secretary of the Army.

"Memo number one directed that all Army personnel would have an AKO account," he said. "And that AKO would be the Army's portal."

Not only is AKO a great service to Soldiers, but it is also financially sound because it saves the Army millions of dollars, said Lee.

The Army accomplishes this by consolidating servers and reducing the number of applications used in the Army, which was the objective of memorandum number two, said Lee.



Vendors showed their products to Soldiers and civilians, receiving first-hand feedback from our warrior force on what works and what doesn't.



"If everybody has an AKO web account, then it reduces the number of servers, administrators and the overhead required on each installation to support web service," said Lee.

Aside from being cost effective, Lee said AKO gives managers the ability to reach out and contact their Soldiers, subordinates or peers at any time with features such as instant messaging.

"So no matter where you are in the world, if you have access to the Internet, and you have a browser on

your PC, AKO is available," said Lee.

The last two memorandums focus on personnel structure and how to serve them better, and logistics, said Lee.

He said part of their goal for being at the Symposium was to get feedback from AKO users.

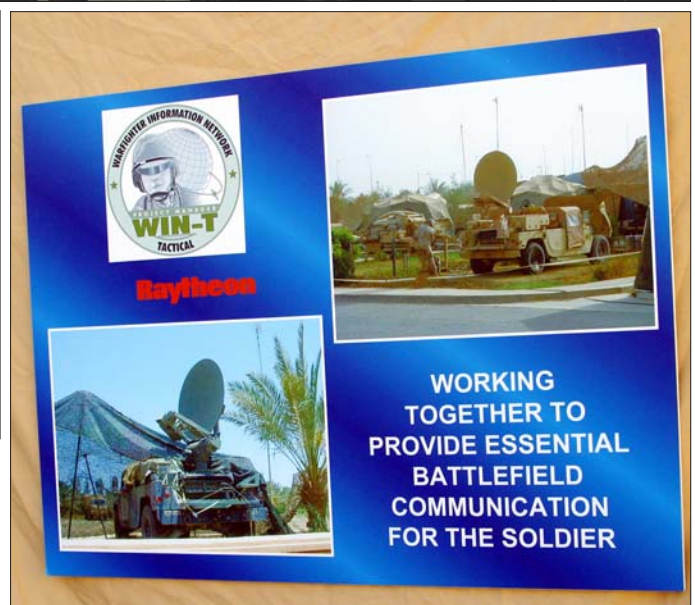
Lee said his team was also at the symposium to lend help to individuals who already have an AKO account and educate them on things they may not have already known or answer questions they might have.

For instance he said many people don't know that their family members can get an AKO account. He wanted to inform the retired military population that this service was available to them as well.

"AKO is pretty much a one-stop-shop," said Lee. "You can find just about anything you want in AKO."

He said if you can't find information in AKO you can access it through AKO by using one of the 240-plus links to external applications available to users.

Symposium attendees gained and shared information through workshops, discovery trips through the exhibit hall and at social events through the week.



Soldiers can find just about any information pertaining to them on their AKO account such as dental or medical readiness information, said Lee. He said Soldiers can also schedule dental and medical appointments online.

Soldiers can use AKO to help enhance their military career by going to the "My Education" link for additional information on on-line courses, he explained.

Lee added Soldiers can further their education, manage finances and

even see if they are deployable by using AKO.

"There is a common misunderstanding that AKO is just mail," said Lee. "It is more than just mail."

The purpose of AKO was to give the Army an intranet, said Harold Tucker, a systems architect for AKO. He said AKO was activated more than two years ago and that about 1.6 million people have signed up with AKO.

"The desire is to have every application that a Soldier, retiree or

Department of Defense employee needs on AKO so that they can get to it," said Tucker.

Tucker said Soldiers will have access to AKO as long as they are active in the military. Retirees, he added, will have an account for life.

Soldiers can use the white pages in AKO to locate someone's e-mail address, just like a telephone book, said Tucker.

Besides being able to access long-lost friends, Tucker said AKO is beneficial to those who use it because



Transformation Technology for the Warfighter



- Assured and Survivable Communications
- Tailored Computing Platforms and Products
- Battle Management Command and Control

it is a secure means of communication.

"It's encrypted," he said, "whereas if you use commercial vendor systems they are unsecured."

He said there are individuals discussing operational issues on unsecured systems. With AKO, they don't have to do that.

Another great feature about AKO is the fact that users can save their favorite Web sites to the portal, and access them from any computer, anywhere in the world, 24 hours-a-day, said Tucker.

"We need to get the word out to our dependents and spouses that they do have the ability to have an account," said Tucker. "We need every Soldier to ensure that their spouse has an account."

He said this is how the family readiness groups can maintain a secure link with loved ones and not put out any sensitive information in the regular insecure Internet where the wrong people can access it.

Aside from AKO, the Army has a web site which is specifically for the

public: Army.mil. Both sites have a similar appearance, Lee said.

"You should get the same feel when you go to both places," he said.

The main purpose behind the Army.mil website is to keep the public informed about the Army, Lee said.

Their booth was at the Signal Symposium exhibition tent as well.

"We are here to educate folks and get the word out that Army.mil exists," said Robert Schell, a web developer for L3 Communications who was manning the booth. "A lot



The 31st Symposium week was filled with Regimental events: a Welcome Ceremony, Signal force lessons-learned updates, workshops and more.



of people don't actually know about it."

Schell said Soldiers have commented on how they like to access Army.mil to look at updated pictures and stories.

"Army.mil is the second highest rated government website only behind NASA (National Aeronautics and Space Administration)," said Schell. "3.5 million visits per month."

With these numbers, Soldiers

and their family members, will always have the communications tools necessary to stay connected.

PVT Monroig is a staff writer for The Signal newspaper, Fort Gordon, Ga. He hails from Naples, Fla.

ACRONYM QUICKSCAN

AKO – Army Knowledge Online
KCC – Knowledge Collaboration Center
NASA – National Aeronautics and Space Administration

A meeting of the minds:

FA24, 53 Senior Focus Group at 31st Symposium

MAJ Pier Durst

It was a professional meeting of the minds for senior technical leaders of the Signal Regiment as Functional Area 24 Telecommunications Systems Engineering and FA 53 Information Systems Management officers gathered for the FA24 and FA53 Senior Focus Group. This was the fourth meeting of the Focus Group since FA24 was established under the Officer Personnel Management System XXI, and officers from Branch 25, FA 24 and FA53 were united to form the Signal Regiment officer team.

The FA24 and FA53 Senior Focus Group meets annually during the 31st Signal Regimental Symposium to obtain an update on transformation initiatives, command realignments and personnel health and welfare as they relate to both functional areas. The Focus Group also provides a forum for senior technical leaders from the field to discuss issues, exchange ideas and to provide input directly to the personnel proponent on management of each functional area.

The Focus Group is comprised of FA24 colonels and selected lieutenant colonels and FA53 colonels – and there is absolutely no problem getting input from the participants. This year the Focus Group was co-chaired by COL Randall Mackey, FA53, commandant, Leader College for Information Technology and COL Charles Dunn, FA24, director, Battle Command Battle Laboratory. Both are resident senior advisors to the Chief of Signal and the Office Chief of Signal for their respective functional areas.

After a quick round-robin introduction by all participating members of the group, Fort Gordon Commanding General BG Janet A. Hicks provided welcoming remarks to the attendants. The general spoke about the importance of both func-

tional areas to execution of the Regiment's mission, and the progress that has been made in each functional area highlighting that COL Bernie Kulifay was recently selected as the first functional area officer to hold the position of Signal Center Chief of Staff and our Regimental Adjutant. Hicks talked about the importance of networks to the current and future force as one of the Chief of Staff of the Army's main focus areas, and also of the complex changes that are occurring in our Regiment and the Army. She closed by soliciting participant input and restating her recurring theme of "What Does the Regiment Think?"

LTC Nello Thomas III, chief, Task Force Networks opened the forum with an overview of the Task Force Network mission. He stressed that as we remain at war, the urgency of transformation becomes more critical. Thomas shared some of the priority issues that are challenging the Signal transformation Task Force such as re-equipping and re-organizing the Regiment. He closed by stressing the importance of the Signal Regiment to continue to work "fervently and with the highest priority."

This was a perfect introduction to the brief by LTC (P) Edric Kirkman, chief, Signal Transformation Task Force on the Transformation initiative being worked by the Directorate of Combat Developments. Kirkman stressed the need for rapid-insertion of new commercial technology into the tactical formations to prosecute the war. The input of Blue Force Tracker over commercial satellite links was the first such commercial integration into combat vehicles. As the Regiment moves forward to transform legacy systems, DCD is building upon this work to recognize and field new capabilities to more modular and scalable Army units as they refit and rearm to prepare for future combat operations.

COL Timothy Fong of the Army

Communications Information Office/G6 continued the briefings by discussing Army Knowledge Management. AKM is the strategy to transform the Army into a Net-Centric Knowledge-Based force. He emphasized that to successfully achieve AKM's strategic imperatives, the Army must implement a centrally managed and consolidated IT infrastructure. COL Carl Hunt from the Joint Task Force-Global Network Operations at Defense Information Systems Agency gave an overview of the joint staff and the roles and mission within the JTF-GNO to include how these relate to the functions performed by FA24 and FA53 officers.

During the working lunch, Donita McGeary of the Information Resource Management College and James Cronin, University of Maryland gave updates on all the recent changes in services provided by their respective organizations that directly impact on the Signal community. McGeary talked about the numerous cost-free IRMC/Department of Defense programs that are available for professional development as well as the ones linked to university degrees. James Cronin, assistant vice president, DoD Program Management, UMUC, announced that based on American Council on Education recommendation UMUC now awards nine graduate-level credits for the Telecommunications Systems Engineering Course.

MAJ Darrel Gregg, FA 53 assignment officer, Human Resource Command gave a detailed briefing of the most recent lieutenant colonel and colonel board results. He also addressed current issues facing the regiment which ranged from availability of branch-qualified captains to steady state Intermediate Level Education. He was followed by LTC Ralph Harris, Information Operations Career Field Colonel Assignment officer, HRC, who gave a quick

synopsis of potential personnel and professional development issues faced by FA 24 and FA53 colonels.

Phil Sines, chief, Officer Division, OCOS, ended the forum by providing a update on the Signal Regiment Campaign Plan. The briefing presented several issues confronting the Regiment as it continues to synchronize and enhance the FA 24 and FA53 career program within the Signal Regiment.

The issues identified for discussion are listed below. Due to time constraints some issues were shelved for future discussion.

1. Officer portion of DA Pam 611-21 requires update for FA24 and FA53

2. Officer portion of DA Pam 600-3, Commissioned Officer Development and Career Management, requires update for FA24 and FA53.

3. The field has expressed need to be able to identify and assign officers with civilian (i.e. Cisco Certified Network Associate) certification skills.

4. The field suggested Army consider implementing Engineering

and Scientific Career Continuation Pay for FA24 and FA53 officers.

5. Should the Signal Regiment initiate a proposal to move the career field designation to the eighth year of service.

6. Although much improvement has been made, the focus group discussed ways to continue to improve the ratio of major to lieutenant colonel authorization in both functional areas.

7. To fulfill major command expectations of recoding positions to FA24 and 53, positions need to be filled by qualified officers as soon as possible.

8. Few articles published in the Regiment's magazine specifically addressing FA24 and FA53 operations and issues.

These issues are posted on the Signal Regiment AKO Community site for comments and recommendations from the field.

The FA 24 and FA 53 Senior Focus Group was a great success. There was an incredible display of "esprit décor de corps" and a genuine desire to make the FA 24 and FA 53 as

strong and viable as possible.

MAJ Durst is with the Officer Division, Office Chief of Signal, Fort Gordon, Ga.

ACRONYM QUICKSCAN

ACE – American Council on Education
 AKM – Army Knowledge Management
 AKO – Army Knowledge Online
 BFT – Blue Force Tracker
 CCNA – Cisco Certified Network Associate
 CIO – Communications Information Office
 CSA – Chief of Staff (Army)
 DCD – Directorate of Combat Developments
 DISA – Defense Information Systems Agency
 DoD – Department of Defense
 FA – Functional Area
 GNO – Global Network Operations
 HRC – Human Resources Command
 ILE – Intermediate Level Education
 IT – Information Technology
 JTF – Joint Task Force
 UMUC – University of Maryland University College



BG Janet A. Hicks, Chief of Signal (center, first row), pictured with FA24 and FA53 Senior Focus Group.

OIF digital battle command: *Baptism by Fire*

by LTC John W. Charlton

The 1st Battalion, 15th Infantry, 3rd Brigade Combat Team, 3rd Infantry Division, recently returned from 13 months of training and combat operations in Kuwait and Iraq. Task Force 1-15 Infantry fought eight major engagements during 21 days of intense combat during Operation Iraqi Freedom and was the first U.S. unit to attack across the Euphrates River toward Baghdad.

Converting to digital battle command

There were 13 separate map sheets in the bustle rack of my Bradley when I crossed the line-of-departure into Iraq. Each was specially cut and numbered so that my task force operational graphics lined up correctly on the map. I had the current map sheet on my 18 by 24 inch map board while the extra map sheets were stored away in a map case. When I reached the end of a particular map sheet, I had to take the map board apart, pull the adjacent map sheet out of the map case (hence the numbering system), and attach the new map to the map board. Invariably, these map changes usually happened on the move and at night. My driver and I spent nearly two days cutting, aligning, and marking these map sheets prior to the start of the war. Leaders everywhere were doing the same drill. We were using 1:100,000-scale map sheets for the operation. When you have to travel over 700 kilometers, you sacrifice detail to limit the number of map sheets you have to carry. We compensated for the lack of detailed maps by using imagery and engineer terrain team products.

I had to simultaneously juggle my map board and the imagery just as when we began our attack into Talil airfield on the first day of the



war. We crossed about 200 kilometers of open desert en route to our objective and then attacked right into a dense urban environment. I was using the 1:100,000-scale maps for the long

see all these battle command aids.

I should have spent the entire time focusing on the small screen

We were using 1:100,000-scale map sheets for the operation. When you have to travel over 700 kilometers, you sacrifice detail to limit the number of map sheets you have to carry.

approach march and imagery for the actual attack. Since it was a night attack, I was also trying to maintain control of a small flashlight so I could

attached to my coax door. The screen had been accurately tracking my location as well as the location of my key leaders and adjacent units



throughout the attack. It had a map database of various scales and satellite imagery for the entire country of

Iraq. Of course, I am describing the Force XXI Battle Command Brigade and Below system. The 3rd Infantry Division received a “dumbed down” version called the Blue Force Tracking system. It did not have all the “bells and whistles” like the full FBCB2 suite, but it did offer basic messaging and situational awareness capabilities. Contractors installed the systems in key-leader vehicles throughout the division. They also gave crash courses on how to use the system.

I did not use the system very much on the first attack of the war because I had only received a short burst of training on the system and had never really put it to the test. I knew how to use it, but lacked the level of experience that I needed to give me the confidence to rely on it during combat.

As a result, I fell back on my “old school” battle-command techniques of juggling maps in the turret of a Bradley. I didn’t completely ignore the new system; I just didn’t fight with it.

I managed to survive the first couple days of combat using my trusty map sheets, but little did I know that my days of relying on paper map products were about to come to an end. My own personal

My own personal transformation to digital battle command would be during operations in a little Iraqi hotspot called, As Samawah.

transformation to digital battle command would be during operations in a little Iraqi hotspot called, As Samawah.

Task Force 1st Battalion, 15th Infantry (1-15) initially was not supposed to fight in As Samawah. We were headed northwest to linkup with the 2nd Brigade Combat Team south of Karbala. However, shortly after we began our movement west, I received a fragmentary order to move to As Samawah and relieve the 3rd Squadron, 7th Cavalry.

Our mission was to isolate As Samawah from the V Corps main supply route to the south. Sadaam Fedayeen forces had infested As Samawah and were a tremendous threat to logistics units moving along the supply route.

The problem was that I did not have any imagery of the town since there was no plan to fight there. This meant we had to use our 1:100,000-scale maps to produce operational graphics. The graphics were almost useless since the maps showed virtually no detail of the As Samawah urban area.

Fortunately, one of my company commanders was getting pretty skilled at using the FBCB2 graphics feature and he transferred my acetate graphics to digits. What an amazing

difference—we could switch map scales and even use digital imagery to see every street in the town relative to our graphic control

measures. We used the mission data loader to transfer the graphics to every system in the task force.

I was impressed with the abilities of the FBCB2 system, but was still not confident enough to go fully digital, so I continued fighting from my map board. My complete conversion to digital battle command would not happen until the infamous sandstorm of March 25, 2003.

We were conducting a reconnaissance in force to find and destroy Sadaam Fedayeen forces. I was planning on using the sandstorm as cover for our movement and we would use railroad tracks as a handrail to guide us into our positions. I had two scout sections along to provide surveillance on the objective. Both company commanders and the scouts had FBCB2, as did my track. We were all using FBCB2 1:50,000-scale maps to track our movements since the sandstorm created zero-visibility conditions. We were literally dead reckoning through the sandstorm using the FBCB2 system.

We ran into problems about halfway through the movement when we tried to navigate around the As Samawah train station. Even the 1:50,000 maps did not show all the

details of the train station. Vehicles were getting stuck on the converging tracks and had to maneuver around several buildings that were not identified on the maps.

The sandstorm made it impossible to see our surroundings and we had several breaks in contact. To help us get around the train station, one company commander suggested we all switch from maps to imagery to see the details of the train station. We were literally maneuvering by instruments like pilots in bad weather, but the imagery and global positioning system functions of the FBCB2 system allowed us to bypass the train station in the middle of a sandstorm.

The experience of being forced to use and rely on FBCB2 during a combat mission under impossible weather conditions completed my conversion to digital battle command. I did not use another paper map product for the remainder of the war and fought every fight thereafter using FBCB2.

Digital battle command: What works well

FBCB2 has revolutionized tactical battle command in many ways. The digital maps and imagery were a tremendous capability — I literally had the entire country of Kuwait and Iraq at my fingertips. I could pan across the maps; zoom in on the imagery; change scale; and even change the color of the gridlines on the map — a very handy feature. I did not have to worry about changing map sheets — the screen updated as I moved. I did not need a flashlight to read the maps and imagery because the screen had an adjustable backlight. The FBCB2 imagery was not quite as clear as a hard copy product, but it was definitely suitable for every mission we executed. It enabled us to navigate through the narrow streets and alleys of Baghdad or determine if



The sandstorm made it impossible to see our surroundings and we had several breaks in contact. To help us get around the train station, one company commander suggested we all switch from maps to imagery to see the details of the train station.

a canal road was suitable for tracked vehicle movement. I relied solely on FBCB2 imagery for all urban operations. If I had to pick the single best thing about FBCB2, it would be the maps and imagery capabilities.

Even though I had a limited number of systems in my task force, FBCB2 greatly improved my ability to battle track friendly units and improve my overall situational awareness. I not only knew where my scouts and company commanders were, I knew the location of all adjacent units and command posts. This greatly facilitated linkups.

I did not have to call to get a company commander's location, I saw his icon on the screen and FBCB2 guided me to his location. I am certain that FBCB2 battle tracking capabilities were instrumental in preventing fratricide. This was particularly important in urban areas where friendly units frequently converged and were often masked by buildings and other structures. Finally, FBCB2 allowed me to track

the progress of the battle and know if things were going according to plan. When my task force seized a key highway intersection south of Baghdad, I could see the company commanders' icons at each blocking position and I knew we had control of

the objective. That cut down on a lot of radio traffic and allowed leaders to concentrate on the fight instead of giving frequent situation reports.

Shortly after arriving at As Samawah, my task force received a mission to send a company-sized force to seize a section of terrain to the west and establish blocking positions. This mission was similar to the one the task force was given in As Samawah: isolate the built-up area and protect the V Corps supply route to the south. I had four companies (two armor and two mechanized infantry), so the loss of combat power would not degrade my operations in As Samawah.

The problem was that the company's objective was 70 kilometers west of As Samawah. I would have no way to communicate with my separated company using organic FM radios. Even using a retransmission station, the distance was too far — FM radios were typically good for about 10 to 20 kilometers. The company enlisted tactical air control-

ler had satellite communications, but could only be used for controlling close air support and emergency medical evacuations.

The only way to maintain daily communications with the company was through FBCB2. The FBCB2 system was satellite based, so distance was not an issue and I sent and received text messages to and from my separated company. The task force was eventually pulled off As Samawah and we moved about 200 kilometers to linkup with the 2nd Brigade Combat Team south of Karbala. I still had a company

securing the separate objective, but we were able to maintain continuous communication and FBCB2 allowed them to later linkup with us south of Karbala. The entire separate company mission simply would not have been possible without the satellite communication capabilities of FBCB2.

Digital battle command: What needs fixing

The biggest problem with FBCB2 was that our digital pipe was too small. This caused several problems with communications, battle tracking and navigation. We were forced to limit our message size to a few hundred bytes. Much of that allocation was consumed just by message header information, which limited the typical free-text message to only a couple of paragraphs. Even the most simple fragmentary order had to be segmented and sent in several messages. The effect on sending graphics was even worse. A standard set of battalion operations graphics required several separate messages to comply with bandwidth limitations. Obviously, every digital system is going to have some limitations, but FBCB2 must allow the



When my task force seized a key highway intersection south of Baghdad, I could see the company commanders' icons at each blocking position and I knew we had control of the objective.

transmission of basic FRAGOs and operations graphics to be a truly useful battle command tool.

The lack of bandwidth also hampered navigation and battle tracking. My position would update about every 10 to 15 seconds, but all the other friendly icons would update about every few minutes. This really made battle tracking on the move difficult.

For example, during one of our attacks, my icon appeared to be leading the task force even though there were other elements in front of me. FBCB2 was updating my position faster than the other systems around me. Even the smallest delay in updating my position caused problems while navigating in dense urban areas.

It was easy to miss a turn because the FBCB2 updated too slowly relative to the actual position of the vehicle. Ironically, my low-cost civilian global positioning system (my digital backup) was updating my position in real time, down to one-meter accuracy, while my sophisticated digital battle command system could not keep pace.

One of the FBCB2 technicians told me that this was a software

problem as well as a bandwidth problem. Either way, it is a serious shortcoming and should be fixed immediately. FBCB2 should have the capability to update all friendly unit positions in real time.

Everyone I talked to about FBCB2 complained about the operating system and graphic user interface. It is about the most non-intuitive operating system and

interface that I have ever used. Even the simplest task took multiple steps to accomplish and some of the procedures simply did not

make sense.

Useful features like drag-and-drop and right-click menus are nonexistent in the FBCB2 GUI. FBCB2 developers really need to work on making the GUI more intuitive and user-friendly. You should be able to customize the interface and put links to frequently used applications right on the desktop. Perhaps designing it to resemble a web page would help.

Nearly every U.S. citizen knows how to navigate the Internet and is very familiar with the functions of a web browser.

The operating system also appeared to be very unstable. If users failed to follow the shutdown procedures explicitly, bad things happened the next time the system was turned on and booted. Somehow, improper shutdowns created bugs in the system and we had to wipe and reload hard drives several times to correct the problem. The operating system simply needs to be more robust and forgiving. The time it took for the system to boot up was also annoying.

The message applications need to be improved. The messages were so cumbersome that nobody used them. The only formatted messages I

received throughout the entire fight were the chemical-downwind messages from the 3rd Infantry Division's main command post. Everything else was a free-text message. One of the FBCB2 technicians told me that 90 percent of the messages sent by Fort Hood units during FBCB2 testing and training were free-text messages, which I believe completely.

The other message formats are too complicated and time consuming to be of use.

The easiest fix for this problem would be to eliminate standard messages completely and design the system so units could install their standard operating procedure message formats. Units train with their SOP message formats and use them to communicate information quickly and effectively. FBCB2 would only enhance the utility of unit message SOPs. Combat messages, such as medical evacuation and spot reports, were more useful but they too need to be simplified to make them user-friendlier.

The FBCB2 graphics application also needs a drastic update. It did not contain all the graphic control measures and unit symbols found in U.S. Army Field Manual 101-5-1.¹

Many of the symbols could not be manipulated. For example, I could not label my attack by fire positions. I used a work-around involving other graphic symbols but it took a lot of extra time just to perform this simple task. The graphics application also needs more free-form drawing tools and it must incorporate "drag-and-drop" features. Users should have the option to quickly duplicate graphic control measures and rotate or flip them as required. If this sounds like basic PowerPoint features, you are right on track.

The FBCB2 system we used during the war lacked any type of collaborative planning tools. I had one FBCB2 system in my S3 M577

and one FBCB2 laptop for the tactical operations center. The laptop was not wired into the FBCB2 network and was only for creating orders and graphics.

The problem was that only one person at a time could use the system. Each staff officer had to wait to type in his section of the FRAGO. It would have been much better to have a networked laptop with each staff section and mission planning tools that allowed those staff sections to

procedures for transferring files are tremendously difficult. We actually had to print a separate instruction page just to show users how to transfer and load files to and from the MDL. The cable connections were very unreliable.

Sometimes we had to connect the MDL to the CPU, while other times we could only get the MDL to work when we attached the cables to the FBCB2 display connections. FBCB2 should use infrared ports for

data transfer just like all PDAs use today. Users could dismount their "all-in-one" FBCB2, carry it to the operations order brief, and get the new order "beamed" into their machine. The file

transfer software should be cleaned up and offer "drag-and-drop" features to make it user-friendlier and intuitive.

The road to digital battle command

It may seem that the purpose of this article is to nit-pick and find fault with the FBCB2 system. While the system certainly has many shortcomings, they should be relatively easy to correct. More importantly, FBCB2's capabilities were *decisive* during combat operations in Iraq. For the first time, ground commanders navigated, maintained situational awareness and communicated freely — all to the credit of FBCB2. This was the first time the system was used on a large scale in combat and it was a huge success. FBCB2 helped prevent fratricide and enabled commanders to conduct operations at a much more rapid pace than the enemy. I never want to go into combat without FBCB2 — it's that good.

The real purpose of this article is to provide feedback on the advantages of using a digital battle command system in combat. This issue goes beyond the context of a particular machine or system.

The compelling issue is that the

FBCB2's capabilities were decisive during combat operations in Iraq. For the first time, ground commanders navigated, maintained situational awareness and communicated freely...

collaborate and assemble their products digitally on FBCB2.

The FBCB2 system is physically too large to use in combat vehicles. The central processing unit was about the size of your average desktop computer and was bolted next to the radios in the rear of the turret. The screen was attached to my coax machine gun door. The antenna was bolted on the outside of the turret. Multiple cables connected all these components together and would frequently fail or come loose, which caused system malfunctions.

During one firefight, my coax jammed and I spent a several very long minutes trying to get the FBCB2 screen out of the way so I could open the coax door and clear the malfunction. Today, we have palm-sized personal digital assistants and tablet PCs.

There should be no reason why the entire FBCB2 system cannot be contained in one small, thin, package. It should also be portable to allow users to dismount with the system to attend order briefings, or go over the digital map with subordinates on the ramp or the hood of a vehicle.

The mission data loader is too large, slow and unreliable, and the

U.S. Army and Department of Defense need to increase the funding and fielding priorities for digital battle command systems, and should include intelligence, surveillance, and reconnaissance systems in the top priority category as well. Simply put, we need to convert our entire military to interconnected digital battle command systems. Every tank, helicopter, ship, supply truck and command post should be equipped with some type of digital battle command system.

It is a tragedy that our mechanized tactical operations centers are still based on archaic M577s and modular tents. Every command post in the military must be mobile, survivable, interconnected, and digital. The real challenge will be providing digital battle command systems to dismounted infantry and special operations forces, but today's technology has solutions for them as well.

Digital battle command must be fully integrated into our doctrine and our institutional training. Officers and enlisted soldiers should be trained at every level on these systems and how to use them to enhance planning and execution of military operations. Our Army and joint doctrine should be updated to exploit the capabilities of these new systems, just like we update doctrine to exploit the capabilities of new weapon systems. Our training and doctrine should allow our soldiers to

master digital battle command systems so they are not forced to convert to using it during combat.

Maybe I did not have enough training, or failed to understand the full capabilities of the FBCB2 system, or perhaps the FBCB2 (light) version that we were using pales in compari-

Based on my experience, I am convinced that digital battle command is the key to success in current and future conflicts.

son with the real thing. All that is probably true, but misses the point. I fought in combat with a very good digital battle command system that had some minor problems.

Based on my experience, I am convinced that digital battle command is the key to success in current and future conflicts. As we look at lessons learned from Operation Iraqi Freedom, we need to embrace digital battle command and recognize its importance in 21st-century warfighting.

NOTES

1. U.S. Army Field Manual 101-5-1, *Operational Terms and Graphics*, U.S. Government Printing Office, Washington, D.C., 30 September 1997.

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Advanced Course, Combined Arms Staff Service School, U.S. Army Command and General Staff College and the U.S. Army School of Advanced Military Studies.

He has served in various command and staff positions, to include XO, 2nd Brigade Combat Team, 1st

Infantry Division, Schweinfurt, GE; battalion S3, 1st Battalion, 18th Infantry, 2nd Brigade Combat Team, 1st Infantry Division, Schweinfurt; observer/controller, Joint Readiness Training Center, Fort Polk, La.; and commander, C Company, 2nd Battalion, 1st Infantry, Fort Lewis, Wa.

ACRONYM QUICKSCAN

ABF – attack by fire
 BCT – Brigade Combat Team
 CPU – central processing unit
 FBCB2 – Force XXI Battle Command Brigade and Below
 FRAGO – fragmentary order
 IR – infrared
 GPS – global positioning system
 GUI – graphic user interface
 ISR – intelligence, surveillance and reconnaissance
 LD – line of departure
 MDL – mission data loader
 PDA – personal digital assistant
 SOP – standard operating procedure

Circuit check

News and trends of interest to the Signal Regiment

Conference kicks off lifelong learning

by PVT Armando Monroig

Fort Gordon hosted a two-day lifelong learning conference Dec. 16 and 17 at Nelson Hall, for Training and Doctrine Command representatives.

The conference explained lifelong learning centers to 32 senior representatives from TRADOC and TRADOC schools.

The attendees toured the Fort Gordon facility and a resident schoolhouse where they observed students using tools from the learning center as well as the use of simulations.

The participants received briefings from Dr. Robert Helms, from the Research Triangle Institute in Raleigh-Durham, N.C., and a key author of the Fort Gordon master plan; COL Bill Wilson, director, Directorate of Training for the U.S. Army Signal School; and MAJ James Pennington, chief of the Fort Gordon Lifelong Learning Center.

One of the conference's main goals was letting installations know the lifelong learning plan will be tailored for them and their needs, according to Pennington.

"The conference was the first step," said Pennington. "We showed them how to build the master plan.

"It's not a cookie-cutter approach," he said. "We want to tailor the solution to how the installation is structured."

"We set up some times with them so we could come visit them and meet their commandants and to work with the issues of building a master plan," said Pennington.

Fort Gordon is leading the way when it comes to lifelong learning. "We are the model, the prototype," he said.

The idea of lifelong learning originated in late 2000, according to



COL Bill Wilson, director, Directorate of Training, gives a briefing on Lifelong Learning Centers at the conference held at Fort Gordon, Dec. 16-17.

Barbara Walton, chief of the University of Information Technology Division, Directorate of Training. In 2001, a study was conducted to get an overview of how training was done at the Signal Center. By July 2001 the master plan for lifelong learning was put on paper.

TRADOC designated the Signal Center as the executive agent to develop a plan for establishing lifelong learning centers for each TRADOC proponent. The Signal Center also serves on a TRADOC-sponsored team assisting schools in developing lifelong learning plans to execute school training strategies. The center is also establishing standardized Lifelong Learning Centers (hardware, software, personnel) across TRADOC for delivery of training and education to active and reserve component Soldiers and Department of the Army civilians.

Lifelong learning is divided into four parts: Assignment Oriented Training, Lifelong Learning Center, Virtual Campuses and Simulations, explained Pennington.

"The lifelong learning center is the hub of the operations," he said.

"That's the seed that makes the lifelong learning tree grow," said Walton. "It's the central nervous system for lifelong learning."

The Fort Gordon center has a digital library, 24/7 helpdesk and a student management database. This is where all the content, simulations, computer systems, databases are to manage a Soldier's training record, said Pennington.

Web-based portals like Army Knowledge On-line, to access news, forum, messages, chat-rooms and download training information are different avenues Soldiers can use to become lifelong learners.

"Under this premise a Soldier coming in the Army can get training on just what they need for their first unit of assignment," said Pennington. A Soldier can get up-to-date training after his or her first duty station with the use of the Lifelong learning Center and UIT.

With this type of teaching, called assignment oriented training,

MAJ James Pennington, chief, Fort Gordon Lifelong Learning Center, said this conference is the first step towards the goal of letting installations know the lifelong learning plan will be tailored for their needs.



training is focused to the individual Soldier who learns only what is needed for his first duty station, and then as the soldier progresses throughout his military career he learns more by using the lifelong learning centers, according to Walton.

She said this is especially helpful for Soldiers studying military occupational specialties with lengthy instruction - some courses are almost 50 weeks long.

Walton said lifelong learning is picking the right types of training and designing them using the latest technology in order to get that training to the Soldier whenever they need it and wherever they are.

Walton emphasized that lifelong learning does not replace traditional teaching but enhances it.

"It's a mixture of the traditional way of teaching, where the teacher stands up in front of the class and new ways of teaching where you get on the Internet and take an e-learning class," she said. "It is then delivered at the right time and the right place.

"That's what lifelong learning is all about," said Walton. "How do we keep up?"

Walton said lifelong learning is the solution and it is going to take a team effort to make lifelong learning centers work. She also said Soldiers need to take the initiative and use the tools these centers provide.

"The schoolhouse has to change the way they are doing business rather than trying to train on the actual pieces of equipment that may be out of date and very expensive," she said.

With simulations as a tool, students can train without actually having the equipment, saving the school house money, she said.

"For example - the astronauts. When they learn how to fly the shuttle, they don't practice flying in the actual shuttle," Walton said. "They practice on a simulator.

"We have young people in the Army now who have grown up using the technologies that support lifelong learning and simulations - video games," she explained. "That's all it is. It's the same idea."

Walton said lifelong learning will help set higher standards for everyone: the Soldier, the leader who guides that Soldier, the unit and the school house.

"The time is right, it's cost effective, we have the right audience," said Walton. "It's the right thing to do for these Soldiers and leaders that we have in our Army today."

"If we don't meet that challenge, we're going to get further and further behind," she said. "We cannot keep doing business the same old way."

"The goal is to make every Soldier a lifelong learner," said Pennington, "and getting training at the teachable moment."

Walton said the Fort Gordon Lifelong learning team will follow up with visits to the schools in January and February. They will visit 14 schools throughout the United States discussing lifelong learning, said Walton.

PVT Monroig writes for The Signal, Public Affairs Office, Fort Gordon, Ga.

TEAM COBRA: 141ST SIGNAL BATTALION'S "TIP OF THE SWORD" IN IRAQ *by 1LT David Humphreys*

141st Signal Battalion, whose motto is, "Sword and Voice," supports the 1st Armored Division in and around Baghdad, Iraq, in support of Operation Iraqi Freedom.

Located at Logistical Support Area Dogwood, the Division Rear Headquarters is separated from the Division Main Headquarters, at Baghdad International Airport by an hour and a half convoy along one of the country's most dangerous roads. Known as "RPG Alley," Alternate Support Route Sue is a hotbed for guerilla activities. Almost daily, gunmen target American Convoys on ASR Sue with Small Arms, Rocket Propelled Grenades and Improvised Explosive Devices. The area along ASR Sue is also full of communication dead zones, which are areas where very-high frequency and ultra-high frequency signals do not propagate. This makes it extremely dangerous for convoys under enemy attack.

The area between LSA Dogwood and BIAP was a Marine Sector of responsibility. The 141st Systems Control coordinated with Division and combined joint task force to find where the Marines were located in sector in hopes of establishing a signal site. As can be seen, this quickly became a joint mission.

The communication gap along ASR Sue had to be eliminated. Charlie Company, 141st Signal Battalion, was the "Tip of the Sword" for this mission. Charlie Company (Team Cobra) provides command, control, communication, computer and intelligence support to the Division Rear Headquarters with a Large Extension Node Platoon and retransmission of key command nets with a Radio Tactical Satellite / Retransmission Team Platoon. June 26, 2003, a Cobra Radio Access Unit and RETRANS Team established a Joint Army / Marine site at Hilltop 43 in order to blanket ASR Sue with seamless Mobile Subscriber Radio

Terminal and Division Command Combat Net Radio coverage.

Moving expeditiously, the heavily armed convoy arrived at Hilltop 43, also known as "Hamburger Hill" for its mosquito infestation. Formerly an Iraqi antiaircraft and artillery site, Hamburger Hill was built for combat. Four M113s from the 69th Chemical Company's Smoke Platoon helped ensure security was tight on the Hilltop 43. Emplacing M113s and dismounted M2s was quick and effortless. Interlocking sectors of fire formed a 360-degree perimeter. M203s eliminated the blind spots, preventing enemies from cowering in them. Using the terrain to its maximum advantage, RAU and RETRANS vehicles deployed below the military crest of the hill, affording them optimal protection, while the antenna systems, silhouetted at the highest point possible, gained maximum signal strength. RAU and RETRANS emplacement and operations plugged the communications gap.

The mission was a major success with no more dead space on ASR Sue. The mission was of such high importance and visibility, the 141st Signal Battalion commander directed that an officer command the site at all times. Filling this roll were two platoon leaders. 1LT Curtis Rhymer, the Radio Platoon Leader, and 2LT David Humphries, the LEN Platoon leader, alternated time on the site ensuring continuous communications support along ASR Sue.

The second night on site, Marines indicated that someone was closing in on the site. Parachute Flares, launched by SPC Nathan McDaniel, captured no sign of intruders from the darkness. However, the following night, Iraqi gunmen opened fire with AK-47s from a nearby wood line. A solid defense plan sprung into action. As Team Cobra rushed to their fighting positions, M113s released a barrage of .50 Caliber bullets.

Tracers surged into the wood line, illuminating the countryside. Smartly, the gunmen disengaged, leaving the rest of the night peaceful. This familiar scenario played out,

night after night, for the rest of the week. High-speed weapons training from Marine Corps Armorer Lance CPL Arroyo, familiarized Team Cobra with the Marines crew served weapon systems and fighting positions, in preparation for future attacks.

Logistic and engineering support was critical in keeping Hamburger Hill Operational. Several times a week, supplies and equipment had to be brought into the site. Bottled water for drinking, water for showering, meals-ready-to-eat and occasional hot meals and equipment had to be constantly rotated onto the site. Additionally, engineers were tasked to help improve site security building berms and clearing sectors of fire. With the large amount of traffic coming to the site, patrols had to be conducted along the entry road to check for mines or improvised explosive devices.

Concluding several weeks on Hamburger Hill, Battalion Operations working with the 1st Marine Expeditionary Force located an abandoned compound near a 1st MEF Forward Operating Base. This compound, our new home, came to be known as Camp Venom.

Rolling toward Camp Venom, Team Cobra hit a set back that presented them with quite a challenge. A Marine support vehicle broke down near a market place outside of Al Yusafiyah, a small town outside of Baghdad known as an extremist hot spot.

Halting in a communication dead zone, the convoy assumed a herringbone defensive posture. Unable to recover the vehicle or abandon it, a wrecker was the next best option. Single-Channel Ground-to-Air Radio System, even with the power amplifier, could not reach out of the communication dead zone surrounding the convoy. Even after raising one OE-254 Antenna, right there on the roadside, there was no answer.

This was the same dead space the RETRANS Team was going out to cover. Ironically, the RETRANS Team themselves needed a RETRANS Team because interference

and terrain profile was too adverse. Posting two M113s and a Humvee with a mounted .50 Caliber M2 to secure the disabled vehicle, the RAU Team forged ahead to Camp Venom. Occupying Camp Venom by force, Team Cobra quickly established its LOS links. Soon the disabled vehicle was repaired and on location.

After Operation Desert Storm, Saddam converted Camp Venom from an Agricultural Extension Center of the University of Baghdad into an Infantry Training School for the Republican Guard Force. Using economy of force, 34 Soldiers and Marines could not occupy every building on the compound. Had the team done so, they would have been spread so thin that the site would have been undefendable.

Occupying smaller two-story buildings, M2 guard posts, perched on rooftops, overlooked the surrounding countryside. M113s interlocked with the M2s from the concealment of nearby trees. Covered by the buildings, RAU and RETRANS vehicles remained protected, while the antennas, bordering a wood line, received both concealment and a clear take-off angle.

Buildings outside the perimeter created a dangerous hazard. Hostiles could sneak into one of the buildings and launch an attack from only 100 meters away. Diligently working together, Team Cobra and the Marines cleared the buildings. Unable to permanently occupy the buildings, these clearing procedures were echoed from time to time. As each clearing team vacated, they planted trip flares to alert the camp of an intruder. By adjusting sectors of fire, the M113s observed all avenues of approach towards and behind the buildings.

At night, observation posts established in the buildings prevented the enemy from using the cover of darkness to gain entrance to them. During the day, Team Cobra dug foxholes, strung wire, and filled sandbags, because site defense is never complete. The Army Corps of Engineers helped by building berms, knocking down trees and triple stranding the site.

In order to stay fresh on the weapons systems, Team Cobra continued its weapons classes at Camp Venom. Turning one unoccupied building into a backdrop for a test fire range, every weapon system was verified on site. Soldiers routinely fired weapons including the M2, M240G, M9 and captured Iraqi AK-47s. Soldiers gained confidence on guard after rocking a building with an M2. Morale greatly improved after captured enemy AK-47s demonstrated terrible accuracy compared to the M16A4.

Like *Hamburger Hill*, Camp Venom became a combat zone. Sporadic gunfire from Iraqi assailants, rained down on the site, while M2s thundered back with overwhelming firepower. After the failure of one of the Marine's M2s, PFC Justin Roney, RAU operator, rushed to the guard post and replaced the M2, unleashing a fury of gunfire from his M249 SAW. SGT Brian Lannon, RAU team chief, referred to the first few weeks as a "shooting gallery." Unable to dent the defenses, assailants turned to indirect fire. Following weeks of firefights, mortars punished the site from above, nearly destroying the camp's latrine. Adjusting defenses to match changing threat patterns, Team Cobra and the Marines of Camp Venom fought back. Marines conducted foot patrols and sent out sniper teams to intercept would be attackers. Team Cobra did its part, manning machine gun posts, clearing the buildings and occupying OPs. Leadership of the site changed stand-to in order to match 100 percent security with the most likely times of attack. During the first few weeks at Camp Venom, small arms fire prompted stand-to times from 2100 until 2300 hours. After the first month, most mortar attacks showered the site around 0300 hours. In response to the emerging threat, Soldiers went on stand-to from 0200 until 0500 hours.

Approaching the end of their deployment, 1st MEF was replaced by elements of the 82nd Airborne Division who chose not to occupy Camp Venom. 1st MEF pulled its Marine contingent from Camp Venom

leaving Team Cobra unable to effectively secure the site any longer. Camp Venom closed as Team Cobra jumped to forward operations base Saint Michael, defended by the 82nd Airborne Division. For two months, Team Cobra held Camp Venom, extending vital command net and MSRT coverage for convoys traveling along ASR Sue, while braving mortar attacks and firefights, demonstrating that Signal Soldiers also make great fighters.

1LT Dave Humphries, a Texas native, served in Team Cobra for the last year as the LEN Platoon Leader. He has recently been assigned as the Battalion Signal Officer for 2-35 Armor Battalion in Baghdad, Iraq.

CPT Curtis Rhymer served as the Radio Platoon Leader for Team Cobra and currently is assigned as the Rear Detachment Commander for 141 Signal Battalion in Wiesbaden, Germany. He spent nine years enlisted as a tanker before transitioning to become a Signal Officer.

ARMY SMALL COMPUTER PROGRAM LAUNCHES *it e-mart*, NEXT-GENERATION GOVERNMENT WEBSITE

FORT MONMOUTH, N.J. – The Army Small Computer Program officially launched its new *it e-mart* website on Nov. 12, integrating the features of ASCP's MarketPlace Direct online shopping site with ASCP's website information about contracts and enterprise agreements all into one seamless web site.

"This is the 'next-generation' of government procurement websites," said Olga Lawrence, assistant project manager, ASCP. "Our goal is to give *it e-mart* the intuitive look and feel of the best commercial websites."

Marian Keitelman, ASCP product leader, agreed. "The experience of using *it e-mart* is like using a sophisticated commercial site," she said "- easy and intuitive to navigate through, but very



The Army Small Computer Program officially launched its new *it e-mart* website on Nov. 12, integrating the features of ASCP's MarketPlace Direct online shopping site with ASCP's website information about contracts and enterprise agreements all into one seamless web site. Pictured left to right are: Marian Keitelman, ASCP product leader; Irby Kennedy, Technical Team Lead; and Olga Lawrence, Assistant Project Manager, ASCP.

powerful in what it allows customers to do."

An improved, robust search engine allows customers to quickly locate products and services from multiple vendors and compare them on a single screen. "You don't have to log in to search, browse or create a temporary cart," said Keitelman. "You can do everything but save or execute a shopping cart or request a quote without logging in."

Customers can create and save multiple shopping carts, allowing them to manage multiple orders separately, Keitelman said. The site maintains a history of executed carts so customers can reference previous order histories. Then they can e-mail a Request for Quote to vendors, who can quickly respond through *it e-mart*. Customers can make credit card purchases, Keitelman said, and submit them to vendors, online.

AKO single sign-on, Business-to-Business Integration

Keeping in step with the Army Chief Information Officer/G6 goal of a single Army portal, ASCP has incorporated single-sign-on integration with Army Knowledge Online into *it e-mart*.

"If you've ever logged in to AKO, you're already registered with *it e-mart*," said Keitelman. She said that customers who have signed onto AKO and then click the ASCP link - or vice-versa - will be logged into the other site without being prompted to enter a user id and password.

Another area where ASCP is keeping step with the latest in the IT world is with Business-to-Business Integration. ASCP has invited all of its vendors to team with them in a B2Bi application, where customers browsing *it e-mart* can "punch out" to a vendor site.

"Say a customer is looking for PCs, and says, 'Oh, let me see what Vendor X has,'" said Keitelman. "They can punch out to the vendor site, put items in their cart, and then seamlessly come back to our site to execute the order." So far, Keitelman said, only Dell is online with this *it e-mart* B2Bi capability, with MPC soon to be ready. "We've invited all of our vendors to participate and look forward to when they do," said Keitelman.

ASCP's Technical Support Group, contracted to CSC, has been working closely with ASCP and GTSI/Appian in this upgrade. Irby Kennedy, technical team lead, said that, as part of this effort, ASCP's URL is changing - the new URL for *it e-mart* is <http://ascp.monmouth.army.mil>. "Don't forget the 's' after 'http,'" said Kennedy, "because this protects our customers' privacy and data exchange over the Internet."

The entire site uses SSL - Secure Socket Layer (128 bit encryption) to provide this level of protection, he said.

ASCP, part of the Program Executive Office for Enterprise Information Systems' Project Manager, Enterprise Infostructure, is the Army's Commercial Center of Excellence for IT products and services. ASCP develops, implements and manages IT contracts and agreements that provide comprehensive hardware and software solutions with enterprise-focused support services within the Army Knowledge Enterprise Architecture.

ENHANCEMENTS IN STORE FOR FUTURE STRYKER BRIGADES

by Tonya K. Townsell

WASHINGTON - Army News Service, - Even as the first Stryker Brigade Combat Team experiences its inaugural mission in Iraq, a plan is going forth to enhance future Stryker brigades. The plan focuses on enhancing the aviation, fire support, computer networks and sensor capabilities of SBCTs 5 and 6, and retrofitting brigades 1 through 4 with newer technology as it becomes available. Secretary of Defense Donald Rumsfeld approved an Army enhancement plan Dec. 8 that provides for the acquisition of Stryker Brigade Combat Teams 5 and 6.

The approval gives the Army permission to begin spending money for the new brigades' acquisitions and fielding. The costs for enhancements and retrofitting through fiscal year 2011 will cost about \$1.4 billion, Army spokesman MAJ Gary Tallman said. The enhancements will begin to appear as SBCTs 5 and 6 are fielded, Tallman said. Then SBCTs 1 through 4 will be retrofitted with the improvements based upon the experiences of SBCTs 5 and 6.

However, the current aviation, fire support, computer networks and sensor capabilities of SBCTs 1 through 4 are adequate for present requirements, he said. The fifth SBCT - the 2nd Brigade, 25th Infantry Division (Light) at Schofield Barracks, Hawaii - is scheduled for fielding in 2006. And the sixth SBCT - the 56th Brigade (Mechanized), 28th Infantry Division (Mechanized), of the Pennsylvania Army National Guard - is scheduled for fielding beginning in 2008.

The first Stryker brigade, 3rd Brigade, 2nd Infantry Division, from Fort Lewis, Wash., is deployed to Iraq. The second Stryker brigade, 1st Brigade, 25th Infantry Division, also from Fort Lewis, is receiving its Stryker vehicles. SBCT 3, the 172nd Infantry Brigade at Fort Wainwright, Alaska, and SBCT 4, 2nd Armored Cavalry Regiment at Fort Polk, La., will be fielded over the next few years.

Stryker brigades were designed as an interim phase in the Army's ongoing transformation. The Stryker Brigade Combat Team is an infantry-centric unit with 3,600 soldiers that can deploy anywhere within 96 hours. Once on the ground, the brigade uses Stryker vehicles, which are 19-ton, eight-wheeled vehicles, to take the soldiers to the fight rested and ready. The first enhancement will be to the communications networking, Tallman said.

The changes will enhance satellite communications by offering high-speed compatibility and interoperability with the joint forces. Tallman said it is key that the Stryker brigades are able to talk and interact with other U.S. forces. In addition to communicating more effectively within the military, Soldiers in future SBCTs will have better sensor abilities, lighter howitzers and organic aviation elements, Tallman said.

Sensor capabilities within the Stryker brigade will be enhanced with the inclusion of 10-meter masts on Stryker vehicles. This will allow Soldiers to engage the sensor system from a concealed position for targets identified up to 10 kilometers away, Tallman said. Future Stryker brigade sensor enhancements focus on sensor-to-shooter capability, which supports the Soldiers' abilities to see first, understand first and act first, Tallman said.

Although Soldiers currently have these capabilities, the next generation will have improved knowledge and abilities. They will also have increased command and control, communications, logistics, target acquisition and intelligence.

Initially, Stryker brigades 1 through 4 will each have 12 M-198 155mm howitzers, Tallman said. But, SBCTs 5 and 6 will be enhanced with 18 of the new lightweight 155mm howitzers. Currently, Stryker brigades have direct aviation support. The aviation piece within the SBCT will evolve with the implementation of future Stryker brigades. Tallman said that beginning with SBCT 5, aviation elements will be organic. The RAH-66 Comanches will go to

SBCT 5 first, then the Army will use the aviation lessons learned to apply to SBCT 6 and for retrofitting the first four Stryker brigades, he said. In the mean time, SBCTs 2 through 4 will have similar aviation packages to the one the first Stryker brigade has, which includes OH-58 Kaiwa and UH-60 Blackhawk helicopters that provide direct support, Tallman said. The timeline for enhancements depends on the availability of the equipment, Tallman said. The earliest any enhancements are scheduled to appear are in SBCT 6 beginning in fiscal year 2005.

Editor's note: A Department of Defense news release contributed to this article.

INFORMATION DISSEMINATION MANAGEMENT – TACTICAL: PROVIDING INFORMATION AT THE RIGHT PLACE AND FORMAT *by Douglas R. Linton III*

Along with network management and information assurance, the third component of network operations is information dissemination management. IDM provides the right information to the right place at the right time in the proper format. Army Field Manual 6-0 further defines IDM as the capability to provide a managed flow of relevant information based on a commander's mission.

The Army's Information Dissemination Management – Tactical Program Office at Fort Monmouth, New Jersey brings the power of IDM to the warfighter. Through tactical automated information services, IDM-T provides several capabilities defined in the Joint NETOPSCONOPS, the Army NETOPSCONOPS, the Global Information Grid Capstone Requirements Document and emerging Signal Regiment information management doctrine.

Key IDM-T capabilities include:

- A unit-tailored IDM-T web-based portal that provides an operational capability to meet staff information requirements and battle rhythm timed information exchanges through a standard browser inter-

face, increasing the warfighter's ability to exchange critical information quickly and easily.

- A unit-tailored channel structure that controls the flow of information, allocates communications resources, and prioritizes information flow, enabling implementation of the commander's dissemination policy.
- Information exchanges through publish, subscribe and alert functions that enable users to send and receive critical information as required.
- Directory replication that enables large directories of information to replicate automatically from rear servers to forward units via optimized routing over high speed links, reducing traffic and bandwidth needs on lower-speed tactical LANs.
- Assured message delivery through JAVA Messaging service that ensures published messages reach the intended user and provides acknowledgement to the originator when messages are viewed.

IDM-T's role-based user access, prioritization and multicasting capability also save bandwidth and reduce delivery times through increased distribution accuracy. The IDM-T software can reside on stand-alone servers or may be embedded on existing servers. IDM-T integrates with all existing and planned Army, Joint and multi-national communications systems such as GBS, WIN-T and the Tactical Internet.

IDM-T is a field proven solution being deployed now within selected tactical units at Joint Task Force echelons and below. These include the 2nd Infantry Division, Southern European Task Force, 1st Marine Expeditionary Force, 3rd Marine Aircraft Wing, 513th Military Intelligence Brigade, and the 501st MI Brigade. IDM-T is also installed at the Fort Gordon Battle Lab. IDM-T is also part of the ASD/C3I Horizontal Fusion Initiative currently underway to accelerate the deployment of information management capabilities by funding the deployment of 25 IDM-T systems.

Future requirements for tactical IDM are found in WIN-T, DCGS-A

and Battle Command Operational Requirements Documents and the Army Knowledge Management Strategic Plan, as well as several other documents.

Since information is now an element of combat power and not just a combat multiplier, the effective use of communications networks through efficient automated tools such as IDM-T is of paramount importance. As a key enabler of information superiority objectives, IDM-T will continue to play a critical NETOPS role for Current and Future Forces.

Editor's note: JAVA-- is not an acronym. It is a general purpose, high-level, object-oriented, cross-platform programming language developed by Sun Microsystems.

Mr. Linton is a retired Signal officer, with present duty as a government contractor within the SIGCEN Directorate of Combat Developments. He is currently supporting the IDM-T Program Office, assisting the Concepts and Doctrine Division within DCD with NETOPS issues.

He has extensive tactical Signal experience, including duty as the 93rd Signal Brigade S3 and support to VII Corps Headquarters during Operations Desert Shield and Desert Storm.

59TH HHD WINS ARMY SUPPLY AWARD *by MSG Wesley Weygandt*

FORT RICHARDSON, Alaska — The Headquarters and Headquarters Detachment, 59th Signal Battalion has won the runner-up 2003 Chief of Staff, Army Supply Excellence Award in its category.

GEN Peter J. Schoomaker, CSA, presented the runner-up plaque to 59th HHD supply noncommissioned officers at an awards banquet Aug. 20, in Alexandria, Va.

In Army-wide competition, HHD 59th was recognized in the "Mobilization Table of Organization and Equipment company with property book" category. Accepting the plaque in Alexandria were SGT Marcus T. Carroll, currently of the HHD supply section, and SSG

Tenisha Colby, a former HHD supply sergeant.

"This is a prestigious award, and we are extremely proud of the soldiers and civilians of the 59th HHD supply staff for their outstanding program," said COL Brian J. Donahue, commander, 516th Signal Brigade.

"The Army's selection criteria says it recognizes units for 'extraordinary' supply operations, property accountability, resource management, command supply discipline, and group and individual supply initiatives," Donahue explained.

"To be named second best in worldwide competition is a tremendous accomplishment," Donahue said. "The battalion commander tells me the 59th is now hungry for first place in next year's program."

Prior to becoming a finalist at Army level, the 59th HHD won the Supply Excellence Award in its category at the 516th Sig. Bde., and then at the U.S. Army Network Enterprise Technology Command.

U.S. Army Quartermaster Center officials said major command evaluations for the award are based on the Command Supply Discipline Program, and winners in each category are nominated to the Quartermaster Center and School. On-site evaluations are then conducted by technically qualified teams assembled by the Quartermaster Center and School.

MSG Weygandt is assigned to the 516th Signal Brigade.

SOLDIERS HELP SET UP PHONE NETWORK IN NORTHERN IRAQ *by SPC Joshua Hutcheson*

ALSULAIMANYA, Iraq - Army News Service — Members of the 101st Airborne Division (Air Assault) participated in a two-day conference in the Kurdish region of Northern Iraq to set up a telephone network centered on the city of Mosul.

The birth of a communications network would connect more people in Iraq. Prior to the war, about three percent of the houses in Iraq had telephones; current levels are at about



Army Chief of Staff GEN Peter J. Schoomaker (left) presents the Army's runner-up Supply Excellence award to SSG Tenisha Colby and SGT Marcus T. Carroll of the Headquarters and Headquarters Detachment, 59th Signal Battalion.

eight percent, said MSG James Price, division radio noncommissioned officer in charge, 101st Airborne Division.

Without a proper network many people couldn't call those outside of their villages.

"If you think of a hotel where you can call everybody within the hotel, but nobody else outside the hotel, it'd be similar to that," Price said. "That's why we're working on this infrastructure, connecting all the switches together."

The phone companies in Iraq are government-owned and operated. Prices are low but it often takes a while for things to be repaired.

"It's almost as if it's a not-for-profit organization. It normally costs \$150 for a line, and it costs less than a dinar a minute to talk, so you're looking at 750 minutes to equal one dollar of revenue," Price said.

To establish a communication infrastructure, members of telephone companies in Mosul, Erbil, Dohuk, Al-Sulaimanya, Kirkuk and employees of the Coalition Provisional Authority met along with people from the Iraqi Ministry of Communication and the 101st Airborne Division to figure out the best way to set the network up.

"The conference was a who's-who of the phone company in Northern Iraq," Price said.

To begin the process the

committee decided to first start off with a microwave line-of-site system between all the major and minor switches in Northern Iraq. They mapped out the best configuration that would allow maximum communication between the major city switches of Mosul, Erbil and Dohuk and link many of the smaller towns and villages in between.

Creating the network will require towns to build or repair communications towers, and purchase power generators. The representatives from the cities will have to supply a list of what equipment they need and the money amounts to officials from the 101st Airborne Division.

"Once everybody gives us their requirements, we put that into a project request, send it to CPA, and they will assist with financing," Price said.

The microwave network will cost between \$4.5 and \$5 million to build. Funding will come from the \$87 billion approved by Congress to use in the reconstruction of the country, and other countries, Price said.

"In a year, we will have made a lot of progress, it's going to be pretty exciting watching the country grow," Price said.

After the microwave system is in place, the next step the committee will take, is to install a fiber-optic cable connection. That connection will be slower and harder to put in place, Price said.

The role of the 101st Airborne Division in this on-going operation is to provide technical support, act as a liaison between the Iraqis and representatives from CPA, and supply transportation when necessary. Soldiers from the division communications section will also provide any help in repairing equipment or communications machinery.

Plans are in place to smooth the transition of this project into the hands of the next group of soldiers who will take over operations in Northern Iraq once the 101st Airborne Division leaves.

The meeting, which was held in

December, was the second of what's scheduled to be a monthly event for the infrastructure committee.

SPC Hutcheson is a journalist assigned to the 101st Airborne Division.

SOLDIERS OF 2-3 FA WIRE SCHOOLS

by CPL Todd Pruden

BAGHDAD, Iraq—New computers and Internet capabilities were made possible for two local schools in the Al Adhamiya neighborhood of Baghdad with the help of soldiers of 2nd Battalion, 3rd Field Artillery Regiment, 1st Armored Division.



SPC John Hano, a Signal systems support specialist with Headquarters and Headquarters Battery, 2nd Battalion, 3rd Field Artillery Regiment, 1st Armored Division, shows students some of his favorite Web sites at a school in the Al Adhamiya area of Baghdad.

Soldiers with the communications platoon of Headquarters and Headquarters Battery decided they needed to put their expertise to use in order to do their part in aiding in the reconstruction process in Iraq.

"When we first got here, we found out (the schools) were missing a lot of supplies," said 2 LT Lucian Ilardi, a Signal officer from Long Island, N.Y., with 2-3 Field Artillery. "Our forte is computers and automation and we decided to go that route."

According to Ilardi, he submitted memos up his chain of command for the request to purchase and install the equipment in order to make the project happen. He said each of the two schools received \$10,000 for the purchase and installation of the equipment.

The items purchased include computers equipped with Windows 2000, printers, scanners, air-conditioning to make the temperature bearable in order for the equipment to function properly and a satellite system, which is used to gain Internet access.

"I think the Internet, most of all, is going to open up their world here," said 2nd LT Ilardi.

Ilardi said the Internet café at the girls' school in the Al Adhamiya neighborhood was the first public Internet café in Baghdad. He said it opened in August.

CPL Pruden is with the 372nd MPAD.

PM DMS-ARMY STREAMLINES TACTICAL MESSAGE SYSTEM, RECEIVES DEFENSE ACQUISITION EXECUTIVE RECOGNITION

by Stephen Larsen

A team from the Product Manager, Defense Message System-Army was one of five Army teams that received the Defense Acquisition Executive Certificate of Achievement—the highest-level acquisition award presented to Army organizations for 2002—at the Acquisition Senior Leaders' Conference in Seattle, Wash. on Aug. 14, 2003.

Claude M. Bolton Jr., Assistant Secretary of the Army for Acquisition presented the certificate to Cathy Doolos, the former PM DMS-A, who is currently the deputy Project Manager, Enterprise Infostructure for the Program Executive Office, Enterprise Information Systems. The Product Manager, Defense Message System-Army reports to the Project Manager, Enterprise Infostructure.

The PM DMS-A team received the certificate in the Program Management category for the radical redesign of the Army's Tactical Message System, taking it from concept through test in just six months and saving the Army more than \$85 million in lifecycle costs as

TMS is fielded throughout the Army.

According to MAJ Pedro Passapera, PM DMS-A's Assistant Product Manager-Tactical, the redesign was indeed radical, trimming the system from nearly 7,200 lbs. of equipment in nine transit cases—including extensive cabling "the size of a tree trunk" and complex servers and routers—down to a simple design that weighs 240 lbs., employs only three ruggedized laptops as servers and one router and fits in only three transit cases.

"Before, we had to modify a Humvee to transport the TMS," said Passapera. "We went from a lot of 'nice-to-have' equipment down to the essential equipment that was really needed to get the mission done."

According to Bill Stapleton, the chief of PM DMS-A's Technical Management Division, the redesign was the latest in an ongoing product improvement process from the time the TMS was a prototype in the early 1990s that weighed in at a whopping 16,380 lbs.

"Soldiers can unload the new TMS from a Humvee and have it up and running in less than 30 minutes," said Stapleton. With TMS, he said, the Army can extend the same Defense Message System services used in garrison—including e-mail based writer to reader messaging based on Public Key Infrastructure signed and encrypted message technology—to deployed units. "TMS provides that seamless integration," said Stapleton.

Passapera added that the success of the TMS program was achieved thanks to the teamwork between PM DMS-A and its Army and industry partners—the U.S. Army Information Systems Engineering Command/Information Assurance Security and Engineering Directorate, the U.S. Army Signal Center, Vitronics, Maddentech, Electronic Warfare Associates, Titan and Data Systems Analysts "They have all provided great support and contributed to the team effort," he said.

Other Army teams that received the Defense Acquisition Executive

Certificate of Achievement for 2002 were the Product Management Office, Telecommunications Systems of PEO EIS, which received two certificates, one for greatly contributing to the successful restoration of the Pentagon information technology infrastructure in the aftermath of 9-11 and the other in the Program Management category; the M45 Chemical Biological Mask Team of the Joint Program Executive Office, Chemical and Biological Defense, which was recognized in the category of Program Management for incorporating new technologies to improve the mask and reduce lifecycle costs by more than \$2.6 million; and the Armament Retooling and Manufacturing Support team, which was recognized in the Industrial Property Management category for employing innovative acquisition reform policies to save the Army approximately \$40 million by attracting commercial tenants into Army Acquisition Plants, lower facilities' disposal costs, create and sustain more than 3,000 jobs and provide approximately \$395 million in economic impact to local communities.

Mr. Larsen serves as the public affairs officer for the Program Executive Officer for Executive Information Systems at Fort Monmouth, N.J.

TEAM SUPPORTS ARMY'S RECAP MISSION AT TOBYHANNA

TOBYHANNA ARMY DEPOT, Pa.—A joint effort between Tobyhanna and the U.S. Army Communications-Electronics Command over the last six months has resulted in the successful completion of all technical manuals required to support the U.S. Army's Recapitalization (Recap) Van and Shelter Program, and met the accelerated fielding date for the Stryker Brigade Combat Teams 1 and 2, completed at Fort Lewis, Wash., in September and December 2003.

The CECOM Logistics Readiness Center's Generator Branch



SSG Carlos Gonzalez (seated) and PFC Elvis Torres of the 276th Maintenance Company, Juana Diaz, Puerto Rico, check a telephone system to make sure the technical manual provides accurate instructions.

Recap team spent six weeks here over the summer working with depot technical publications and engineering personnel to help write, validate and verify the technical manuals.

The program is part of the U.S. Army's worldwide Recap Program, an effort to maintain and update systems already in use, such as communications-electronics shelters. The program includes rebuilding and adding state-of-the-art technology to enhance the Army's maintenance capability in the field. Program Manager-Force Sustainment System manages the Electronics Van-Shelter Recap program, under the direction of LTC Lawrence Silas.

The systems are brought to a like new condition, called 'near zero miles, zero hours,' with newer technology included. Soldiers use the shelters and vans as shops to repair communications-electronics equipment used by active Army and National Guard units, and to store tools and components needed for those repairs.

The teams worked together with Army personnel stationed at Tobyhanna and members of two Army Reserve units, the 276th Maintenance Company, Juana Diaz, Puerto Rico, and the 818th Maintenance Company, Fort Meade, Md., to complete the formal validation and verification of the four manuals. The two units were at Tobyhanna for

their annual active-duty training.

"Having soldiers who specialize in the AN/ASM-146/147/189 and 190 systems perform the verification tasks is critical to ensuring that the documentation and procedures are accurate and valid," said Michael Khalife, chief of Tobyhanna's Technical Publications and Provisioning Division. "We can have soldiers from the field prove that the support documentation sent with the equipment is suitable to their needs. If it isn't, we work directly with them to make the appropriate modifications to the documentation, hardware or both. Our ultimate goal is to support the soldier."

"The operator manuals are designed so that if the operator of a van or shelter can't perform their duties, someone else can use those manuals to operate the equipment and make repairs," added William Pardy, CECOM Weapons System Support/Logistics team leader.

The soldiers checked the manuals' accuracy by using them. "We performed the procedures from the operator's manuals first, then the same with the repair manuals. Some of the manuals were not accurate and we would tell the team immediately," said SSG Carlos Gonzalez of the 276th Maintenance Company, which assisted with the validation/verification of the AN/ASM 146 and 147 shelters. "Some of the information was too technical; an engineer would understand it, but not the average soldier."

Other reservists from the 276th who assisted were SSG Eduardo Lopez, SPC Samuel Morales, and PFC Elvis Torres. SPC Toby Hoffman, SPC Jerome Neal, SPC Barry Bates and PFC Eric Arce of the 818th Maintenance Company assisted with the AN/ASM 189 and 190 vans.

"We validate and verify the technical manual information against the equipment," said Carol Widmaier, CECOM technical publications team leader. "We have the soldiers perform each maintenance procedure using the technical manual. Illustrations and callouts are validated, and the repair parts special tools list illustrations are

checked against the parts list. The soldiers worked with the teams to rewrite inaccurate or overly technical sections."

"This project really demonstrated the outstanding caliber of personnel the LRC has in its ranks," said Arcadio (Tito) Figueroa, contractor and lead logistician. "The team never hesitated to work many long and odd hours to accomplish the tasks at hand, under the leadership of the Project Leader, Ken Shedlock and the Weapons System Support / Logistics Manager, William Pardy. As I continue supporting the LRC projects, I will miss the cohesiveness and professionalism demonstrated by this team and the soldiers that supported it."

The CECOM Recap team consisted of: Kenneth Shedlock, mechanical engineer and project leader; William Pardy, weapons system support manager, senior logistician; Carol A. Widmaier, senior technical writer; Tito Figueroa, senior logistician; Douglas Silverman, technical writer; Carol Kyle, technical writer; Michael Van Blarcum, provisioner; and Stanley Quamina, provisioner.

The Tobyhanna Recap team consisted of: SGT Kory Lilly; Michael Khalife, chief of the Technical Publications and Provisioning Division; Bret Hunt, production controller; Richard Evans, technical writer; Robert Malewicz, technical writer; Art Schock, technical writer; David Whitbeck, technical illustrator; Thomas Scandale, equipment specialist; Thomas Marsico, equipment specialist; Fred Kerr, electronics technician; and Fred Ecklemann, Reserve Component training coordinator.

Tobyhanna is carrying out a multi-year, multimillion-dollar workload rebuilding (recapitalizing) and upgrading hundreds of storage and maintenance shelters and vans as part of this program.

REPAIR SUCCESS FOR AIR FORCE RADIO SPARKS MORE WORKLOAD

by Anthony Ricchiazzi

TOBYHANNA ARMY DEPOT, Pa. — A demonstrated ability to overhaul the AN/ARC-186 Radio Set has earned more work for the depot.

Technicians here began repairing and testing the radio in January, working on a 50-radio program for the U.S. Air Force's Warner Robins Air Logistics Center, Ga.

"Warner Robins-ALC contacted us to ask about our repair capabilities on the ARC-186 in order to establish a second source of repair to supplement their current workload requirements," said James Walters, an electronics mechanic leader in the Airborne Communications / Instruments Division, Avionics-Intelligence Electronics Warfare Systems Directorate. "After arranging a site visit of their repair line at their facility, we discussed our capabilities and provided an estimate on the quantity of radios we could repair per month."

The Air Force was satisfied with Tobyhanna's projected quantities per month and established a repair program at Tobyhanna.



Roy Dudeck, an electronics mechanic in Tobyhanna Army Depot's Avionics-Intelligence Electronics Warfare Systems Directorate, prepares to test an AN/ARC-186 Aircraft Set circuit card. The U.S. Air Force increased the workload for these radios after technicians successfully demonstrated they could overhaul them.

"Because of the success of the original program, Warner Robins-ALC increased program authorizations and we received an additional quantity of units to repair for FY-03 (Fiscal Year)," said Dave Shuleski, division chief.

The ARC-186 is a small, lightweight radio used in helicopters, planes and shelters for air-to-air and air-to-ground communications. Tobyhanna has experience working on the Army's version of the radio.

"The original radios were fielded in the 1960s and have proven to be very reliable," Walters said. "We were repairing about 10 radios per year for the Army before this workload began."

Five technicians overhaul the system's radio transmitter, power amplifier, receiver, audio, control boxes and synthesizer components. "The program grew as we developed capabilities to overhaul the circuit card sub-assemblies in the receiver/transmitter," Shuleski said. "We received an additional six programs to repair the sub assemblies, which amounted to several dozen circuit card assemblies per program for FY-03."

"The synthesizer is the most difficult part of the mission," said

Roy Dudeck, electronics mechanic. "It creates the radio's frequencies and is very complicated." Components can also be configured differently, adding to the challenge. For example, there are two versions of the power amplifier.

Walters said a program is being planned to troubleshoot the radios using automated test equipment. "We now troubleshoot them manually using voltage meters and oscilloscopes," he said. "It takes about eight hours for a complete overhaul, but with the addition of ATE, we should be able to reduce that and increase

production to get radios to the field faster."

Tobyhanna Army Depot is the Defense Department's largest center for the repair, overhaul and fabrication of a wide variety of electronics systems and components, from tactical field radios to the ground terminals for the defense satellite communications network. Tobyhanna's missions support all branches of the Armed Forces.

Mr. Ricchiazzi writes for Tobyhanna's Public Affairs Office.

DEPOT REPAIRS SIDEWINDER: U.S. NAVY — ANOTHER SATISFIED CUSTOMER

by Michele Yeager

TOBYHANNA ARMY DEPOT, Pa. — The U.S. Navy has certified the depot's capabilities to repair the Sidewinder missile. The Sidewinder is a short-range, heat-seeking, air-to-air missile used by the Navy and Air Force.

Personnel from the Naval Warfare Assessment Station, Corona, Calif., visited Tobyhanna in August to grant indefinite certification for Tobyhanna to continue the repair, overhaul, modification and testing of the guidance and control systems of the Sidewinder missile.

"This is a significant milestone for the depot," said Terry Lampton, director of Communications Security and Tactical Missiles Systems. "Only through the dedicated efforts of our equipment maintenance technicians, test station operators and Production Engineering Directorate personnel could we achieve this accomplishment. I'm very proud of the way production and support personnel hung in there during all the adversity they had to overcome."

Not only did depot personnel have to learn new jobs, but they also had to work with new, unproven test stations, Lampton explained. "While we now, finally, have stable test stations, the time leading to this point was very trying."

The Sidewinder missile GCS workload arrived here in October



Joseph Marshalek, an electronic measurement equipment mechanic in the Communications Security and Tactical Missile Systems Directorate, uses a radiometer to calibrate the infrared heat source on the Navy Rate Table. The table is used to test the guidance and control section of the Sidewinder missile.

2000 from Letterkenny Army Depot, following 1995 Base Realignment and Closure Commission decisions.

"At that time, we received conditional certification, which meant that we had to be re-certified every six months," said Lorraine Hunt, chief of the Sidewinder Missile Division, COMSEC and Tactical Missile Systems Directorate.

"Indefinite certification means missile test station data will now only be required by the Navy once a year to maintain certification," Hunt said. "Now, the only time re-certification will be necessary is when a test console has a major upgrade."

Even with all the progress made at Letterkenny for the four and a half years previous to the workload transfer, final certification was never received, according to Hunt.

Tobyhanna has successfully overhauled about 2,200 Sidewinder GCSs since the workload began. Joseph Marshalek, an electronic measurement equipment mechanic in the Sidewinder Division, has been supporting the Sidewinder workload since December 2001.

"Maintenance manuals are like our bibles, and we had to create new ones to support the test stations for the Sidewinder GCS workload," he said. The manuals were drafted by engineers and technical writers at NWSA, and then forwarded to Tobyhanna for evaluation and input.

"It was a major group effort among depot engineers and electronic technicians, Sidewinder personnel and the folks in Corona [Calif.]," Marshalek said. "Not only did we have to finalize the manuals, but we also had to test them to ensure they were correct. We compared everything with historical data to ensure accuracy." Changes were made four or five times before final approval, Marshalek said.

"The biggest challenge was that the Sidewinder GCS workload is mechanically

intensive, compared to electronic devices we're accustomed to working on," he added. "We started by taking our general knowledge and applying it to the unfamiliar workload."

"Over time, and through consistent documentation, we learned the required procedures and are now confident that we can accurately calibrate and maintain the systems. The Navy certification confirms our abilities."

Ms. Yeager is the assistant editor with the Tobyhanna Army Depot Public Affairs Office, Tobyhanna, Pa.

KOREA: U.S. NAVY PILOTS CAN LAND SAFELY THANKS TO TOBYHANNA UPGRADES

by Michele Yeager

TOBYHANNA ARMY DEPOT, Pa. — Depot technicians played a key role in making life easier for the airmen involved in radar system maintenance at an air base in Korea.

Tobyhanna refurbished an AN/GPN-22 Precision Approach Radar (PAR) system here, shipped it to members of the 8th Communications and Civil Engineer Squadron in Korea and provided on-site support.

The project went well, confirmed John Glatz and Frank Savaro, the two depot electronic mechanics who traveled to Kunsan Air Force

Base in May to set up and test the system.

"Once we got it set up and tested, we also completed the final FAA [Federal Aviation Administration] flight check. Everything passed with flying colors," Savaro said.

He and Glatz work in the Air Traffic Control Division, Surveillance Systems Directorate. When the system came into the depot from another unit about nine months earlier, they performed a complete overhaul on it.

Their work included all mechanical and electrical repairs on the line replaceable units and all associated equipment, such as ladders, canopies and the maintenance stand.

"We also worked closely with personnel in the Sheet Metal Structural Repair Division, who worked on the shelter that houses the PAR," Glatz said.

"It was my first time in Korea," said Savaro, adding that it's a beautiful country with very friendly people. "I learned a lot working with the Squadron members and the Raytheon crew. It was interesting to see the system in operation between the PAR shelter on the runway and the RAPCON [radar approach control] operations center."

Tobyhanna Army Depot

The PAR is a fixed, ground-based approach control system used to recover all types of aircraft during inclement weather. "The system is



U.S. Air Force personnel and civilian contractors position a Precision Approach Radar antenna reflector for installation at Kunsan Air Base, Korea. Electronic Mechanics Frank Savaro and John Glatz, of the Surveillance Systems Directorate, were on location to set up and test the radar system for the 8th Communications and Civil Engineer Squadron.

used to guide primarily Navy and Republic of Korea Air Force flyers to a safe touchdown on the runway during periods of low visibility," said MSG Stephen VanStee, 8th Communications Squadron air traffic control and landing systems branch chief.

The old system had been in place 15 years and the replacement couldn't have come at a better time, said VanStee. "This swap out was part of the programmed depot maintenance program where every so often, we'll swap out a major system like this and put a fresh one in place."

The price tag on maintaining the old system was high, nearly \$220,000 a year.

The members of the radar maintenance flight were spending 10 to 12 hour days, weekends and holidays trying to keep the old one running, according to an article in the air base's newspaper.

Now, according to Tech SGT Susan Faus, noncommissioned officer in charge of radar maintenance, the members of her team have the opportunity to focus on training and their other duties around the base because the radar shop's workload was reduced by 60 percent following this replacement, VanStee said.

Faus and Tech SGT Charlie

Hyman, chief of plans and implementation for the PAR replacement project, knew the old system had to go, but replacing that system with a new one was a big project all in itself.

"It wasn't one big thing that was the challenge," said Hyman. "It was managing the project – making sure all the bits and pieces came together."

"The installation was completely smooth and uneventful," said VanStee, who noted that it was the fastest installation of this type of system that they had participated in within the Pacific Air Forces.

The physical implementation of the PAR began on May 3 and ended just 15 days later, but Hyman began the preparation for the swap six months earlier, Faus said.

The radar maintenance personnel are quick to point out they were not alone in the effort to replace this system. They acknowledge many people, from civil engineering to transportation to the Tobyhanna personnel and civilian contractors who made the special trip to Kunsan, for making it happen.

Glatz and Savaro spent three weeks in Korea. "It could have been a much longer trip, if not for the very knowledgeable and supportive Squadron members and contractors we worked with," Glatz said.

"It was a strong team effort that allowed us to complete the installation so quickly," Savaro added.

Editor's Note: *Excerpts from this article were written by 1LT Heather Healy, 8th Fighter Wing Public Affairs Office, and appeared in the May 30 WolfPack Warrior, the installation newspaper at Kunsan Air Base, Korea.*

507TH SOLDIER RELATES IRAQ DEPLOYMENT

by SPC Lindsay Oliveras

FORT WAINWRIGHT, Alaska – Hooking up a computer network in the middle of war-torn Baghdad may seem like a daunting task. That, however, is what one 507th Signal Company soldier did while deployed to Iraq from March to August.

PFC Jeffrey Dear, an informa-



Electronics Mechanic John Glatz, Air Traffic Control Division, lifts the front panel of the Azimuth Elevation Range Indicator of an AN/GPN-22 Precision Approach Radar System. He and co-worker Frank Savaro spent about three weeks in Korea to set up a similar system for the Air Force.



PFC Jeffrey Dear displays two of Saddam Hussein's personal .045 caliber pistols, which were found last spring by Soldiers of the 5th Special Forces Group at one of Saddam's palaces in Baghdad. Both pistols have Saddam's initials engraved on them. The one shown at left is black with gold accents, and the other is chrome and gold with an ivory handle. The pistols are now on display at the Fort Campbell, Ky., museum.

tion systems operator here, also fixed computers during his combat tour.

"It was amazing," he said. "It was the experience of a lifetime to be a part of history." After returning from Iraq, Dear spent about a month at his home in South Carolina before returning to Fort Wainwright with a smile on his face and a new combat patch on his sleeve.

"A lot of people don't get the chance to earn a combat patch," Dear said. "There were rough times and good times. I'm just glad to be back alive.

"There was a lot of action going on, especially during convoys," he said. "At times, there was so much going on you don't even remember what happened."

Dear does remember being nervous, though, riding on the back of a vehicle in full combat gear. "It's pitch black in the middle of nowhere," he said. "Of course your squad leader and commander know where you are, but it's still kind of scary."

"One of the hardest parts of a deployment is the uncertainty," said 507th Signal Company 1SGT Victor Fernandez. "A deployment is a test of your abilities to handle stress, apply technical knowledge and recall tactical skill."

Dear said his training at Fort Wainwright prepared him for the challenge. "The cold weather training didn't help so much since it was 140 degrees," he said laughing, "but my NCOs (noncommissioned officers) trained me well in common task training."

Fernandez said the 507th trains to be technically and tactically proficient, and Dear is an example of why that's so important. "He is the epitome of what the battalion is striving to achieve by pushing the total soldier concept," said Fernandez. "Dear is a quiet young man who has the tendency to want to take charge, lead by example and be a role model for his fellow soldiers."

Aside from learning to keep his head down, staying alert and listening to advice peers and leaders gave him, Dear said another lesson he learned before this experience was also reinforced. "The more you sweat in training, the less you bleed in combat," he said.

Dear worked 12-hour shifts during his tour. During his down time, he slept, took showers, washed his clothes and called his family. "My family was surprised that I was there," he said. "My mom acted like any other mom. She was worried and concerned."

Dear said he is glad to have fought for his country and make it back alive. The first things he did once he returned was take a long shower and visit McDonald's. "You appreciate more when you come back," he said. "There were a lot of guys who didn't or won't make it back. You just have to hope for the best."

SPC Lindsay Oliveras is with the Fort Wainwright Public Affairs Office.

ARMY RESERVE SIGNAL COMMAND RECEIVES NETWORKING AWARD

by CPT Greg Majewski

The 335th Theater Signal Command received the Network Trailblazing Award in Atlanta Nov. 6 for its computer networking operations in support of Operation Enduring and Iraqi Freedom.

TechTarget, an Internet technology based company, which recognizes civilian corporations and other organizations for their work in the IT industry, gave the award.

"I've been following network technology for 15 years," said Paul Gillin, vice president of editorial for TechTarget. Gillin also served as a judge

"I've never seen a case where someone has had to build a network of this size and this scope, just by itself, much less under battlefield conditions in which these guys were dealing with," said Gillin.

The 335th competed against eight other finalists in the Network Trailblazer category.

Another judge in the competition said he was more impressed with the magnitude of the operation.

"The sheer size of this build out alone is impressive," said Zeus Kerravala.

"The fact that it was so successful in supporting a globally important event makes it extraordinary."

MAJ Thomas Lantzy accepted the award on behalf of the 335th Theater Signal Command. His team led in the planning of the IT operation.

"At the time we were building out the network, we did not think it to be a very big thing because we were so busy," said Lantzy. "But looking back now, I can see just how big of an accomplishment this actually is."

TechTarget says it recognized the 335th for using leading-edge networking technology to slash costs, generate new revenue or improve productivity, resulting in a network that provided users with increased efficiency, mobility and agility.

MG "Rip" Detamore, who commands the 335th, says he couldn't be prouder of the work his soldiers have done in support of the global war on terror.

"These men and women, many of whom are reservists, have performed magnificently, under extremely harsh conditions, and under pressure to meet timelines very few can even imagine...this project could absolutely not slip. After all, lives were at stake, and many of our soldiers were saved, by the ability of our Warfighting Commanders to execute their missions with the information dominance these networks provided. Nothing can be more critically important than that," said Detamore.

"This award only demonstrates the professionalism, determination, and dedication of great citizen soldiers, as well as our active forces. It is a great tribute to the teamwork of all of our Signaleers — Army, Marine, Air Force and our Allies — on today's digital battlefield."

The 335th Theater Signal Command is responsible for the communication and computer network stretched across 25 coun-



TechTarget, an Internet technology based company, which recognizes civilian corporations and other organizations for their work in the IT industry, gave the networking award to the 335th Theater Signal Command for their work stretching across 25 countries in the area of responsibility.

tries in the southwest Asia area of responsibility.

The unit is based out of East Point, Ga.

CPT Majewski is with the 335th Signal Theater Command.

78TH SUPPORTS JAPAN'S DISASTER DAY EXERCISE

By 1LT Luan Nguyen 78th Signal Battalion

CAMP ZAMA, Japan — Earthquakes and typhoons are common disasters frequently occurring in Japan.

To prepare for such disasters, the Kanagawa Prefecture Emergency Action Center and the U.S. Army Japan Emergency Operation Center conducted their annual Disaster Day exercise Aug. 24.

The 78th Signal Battalion High Frequency Radio Division mission provided secondary communications support to the EAC

and the EOC.

SSG Robert Franklin and SPC Donald Yonce from the 78th's HFRD departed Camp Zama for a Kanagawa Prefecture governmental building, where they set up their international maritime satellite and associated equipment on the roof.

Following exercise instructions, they began communications checks by placing calls to the USARJ EAC and the U.S. Army Center for Health Promotion and Preventive Medicine's INMARSAT. After successful contacts were made, they conducted a secure voice and fax communications check by calling and sending faxed documents via STU-III (secure telephone) to the USARJ EOC.

Franklin and Yonce concluded the communications exercise by sending and receiving voice and fax communications to the U.S. facilities liaison in Yokohama.

"The exercise was a tremendous success," said LTC William Montgomery, battalion commander and G-6, USARJ. "The 78th's HFRD team performed superbly, receiving praise from the USARJ EOC personnel for their quality support."

"This bilateral training event will undoubtedly enhance our ability to prepare for future disasters in Japan," Montgomery noted. "It was a great opportunity for our signal soldiers to refine their skills and technical expertise, but more impor-



Disaster Day exercise proved successful after the international maritime satellite equipment was set up with the by the 78th and messages were sent to the USARJ EAC and the U.S. Army Center for Health Promotion and Preventive Medicine's INMARSAT.

tantly it was a chance to support and work with our host country in becoming better prepared when disaster strikes."

1LT Nguyen is assigned to the 78th Signal Battalion.

NEW FRONT LINES: THE DEFENSE OF ARMY HAWAII'S NETWORKS

by 1LT Marcus Brakewood

FORT SHAFTER, Hawaii – An influx of malicious network activity recently elevated the operational tempo of the U.S. Army Hawaii's Directorate of Information Management's information assurance program.

A rash of viruses activity across the network, starting with the Mimail Mass Mailing Worm and the Sobig Mass Mailing Worm that attempted to infiltrate through email services, then the Blaster and Welchia Worms, which used a vulnerability in a variety of Microsoft Operating Systems, and ending with the Swen Mass Mailing Worm, which again threatened email services.

The DOIM's Network Management Group, Customer Support Center, and Networks Operations Center responded to counter these infiltration attempts.

Through well written operational orders, trained system administrators and users coordinating joint defense efforts through the DOIM's combined team effectively combated the previously mentioned threats.

To strengthen Army Hawaii's network's defense, the Network Management Groups at Schofield Barracks and Fort Shafter stood up a virtual perimeter around the DOIM's servers that blocked the above-mentioned activity.

The DOIM's Customer Support Center was quick to react by coordinating a combined effort between supported units, and the Combat Support Command personnel to harden these systems from future attacks.

Before the outbreak of these threats, the DOIM's Network Opera-

tions Center informed and assisted system administrators throughout USARHAW on methods to protect their computer systems from attack.

The NOC managed the cooperative efforts between the supported units and USARHAW system administrators to contain, prevent, and recover after each attempted attack.

The NOC is continuing to train system administrators and users on how to prevent the exploitation of their computers, while also drafting courses of actions to improve the overall security of USARHAW's networks against further aggression.

1LT Brakewood is assigned to U.S. Army Hawaii Directorate of Information Management.

67TH SIGNAL DEPARTS FOR DESERT ROTATION

by SSG Kelly McCargo

FORT GORDON, Ga. — As choruses of people counted down the New Year, the tears streaming down some of their cheeks had little to do with enthusiasm for the year to come.

Many 93rd Signal Brigade families knew that 2004 would be an entire year without the comfort of their spouses, sons or daughters.

Two days into the New Year, Jan. 2, more than 500 friends and family members said farewell to the Soldiers of the 67th Signal Battalion during a departure ceremony at Fort Gordon's Alexander Hall at 1 p.m.

The 67th Signal Battalion at Fort Gordon will deploy to the Central Command Area for one year as part of America's continued support of the war on terrorism. The 67th's mission will be to provide voice, video and data services to customers located at various bases.

Representatives of the 67th Signal Battalion stood stock-still at attention on the stage as LTC Paul LaDue, 67th Signal Battalion commander, and CSM Nicolino Parisi, rolled and cased the battalion's colors; officially declaring the battalion deployed.

"Today is another historic day for the 93rd Signal Brigade," COL



SPC Douglas Schmitt and SPC Joshua Gerber of C Company, 67th Signal Battalion, find their seats aboard an aircraft for their long journey to the Middle East.

Nathaniel Smith, 93rd Signal Brigade commander. "Today marks the culmination of four months of intensive training and the official deployment of the 67th Signal Battalion to defend this nation.

Augusta's Mayor, Bob Young, thanked the 67th Signal Battalion Soldiers and presented them with Augusta's flag.

"They are true warriors and are prepared for this mission," Smith said. "They didn't attain their current readiness without the crucial support of their families, other soldiers within the brigade, and the Augusta community."

The ceremony was held a few days before the actual flights due to the uncertainty of the flight schedules.

"We're having the departure ceremony to give the families an opportunity to recognize these Soldiers before they leave," LaDue said. "The unit wanted to get all of the Soldiers and their families together in one place and do something special."

An emotional slide presentation

profiled the amount of pre-deployment preparation that was required of the 67th Signal Battalion Soldiers, with the support of the 56th Signal Battalion and 93rd Signal Brigade's Headquarters Company.

After the ceremony, red-rimmed eyes dotted the auditorium.

"Of course I'll miss having the man around the house—making sure the doors are locked, making sure you're safe," said April Mason.

April's husband, SPC Joshua Mason, A Company, 67th Signal Battalion, was sad because he'll be leaving his wife and five-month old son, but said that he was prepared for the coming mission.

"I'll certainly miss my family very much, but it's definitely worth it," Mason said. "I joined the Army for a reason—to serve my country, and this is exactly what I'm doing."

The 67th Signal Battalion will be replacing the 63rd Signal Battalion. The 63rd Signal Battalion departed February 2003 and is scheduled to return to Fort Gordon in March.

The last elements of the 67th Signal Battalion boarded the jet liner at Augusta Regional Airport at Bush Field on a rain sodden evening. Family members stood by the airfield's gate entrance as loved ones ascended the stairs to the aircraft—the rain mixed with the tears that lingered after the ceremony.

SSG McCargo is a public affairs specialist for the 93rd Signal Brigade.

LEADER RECOGNITION

DEFENSE EXECUTIVE OF THE YEAR: BOUTELLE'S VISION KEPT THE MILITARY CONNECTED IN IRAQ

by Sami Lais

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During the Iraq war, the Army's battlefield communications flowed with unprecedented speed and reliability, keeping nearly every soldier connected, Defense Depart-



LTG Steven W. Boutelle was named the Information Technology person of the year at the annual Government Computer News Awards gala.

ment officials have said.

Warfighters used the secret version of the Army Knowledge Online Web portal to share information throughout the Iraqi Freedom and Enduring Freedom operations.

Now Army CIO, the man in charge of the networking effort in Iraq and behind the model for AKO, LTG Steven W. Boutelle has been on a mission to improve Army communications since his transfer to the Signal Corps in Washington in 1970.

Coming up through the ranks and working in information technology as a senior Pentagon staff member honed Boutelle's leadership skills, said his predecessor as Army CIO, recently retired LTG Peter Cuvillo.

"None of us do this alone," said Cuvillo, now a vice president for information infrastructure at Lockheed Martin Corporation.

"But when it comes to getting things done, he's the go-to guy. He knows who to talk to, who to assemble—whether that's program managers, field commanders or contractors—and who to ask for advice. He's a master at blending management with leadership," Cuvillo said.

Since his stint as one of the key architects for Task Force XXI, the

Army's experimental digital evaluation force, Boutelle has repeatedly shown what Cuvillo called "enlightened leadership."

During Operation Iraqi Freedom, 80 percent of the Army's communications traveled via leased commercial satellites, a deal Boutelle made early, before demand drove prices through the roof.

Hearing good advice

"That was the result of a value judgment by a bunch of very smart people who work for me," Boutelle demurred. "As we watched what was happening in the Middle East, they came to me and said, 'You know, we may need to have access to a lot more satellite communications than we have. The only way we can do that is to reserve that time now.'"

The cash outlay was substantial, Boutelle said. "As with all decisions, there was a certain amount of risk, but in leasing satellite transponders early, we beat out CNN and Fox. But it was temporal, we did not have to outbid them."

In retrospect, the decision looks golden. Because of it, during Iraqi Freedom, commanders, soldiers and U.S. allies were able to maintain near-constant, real-time contact via satellite and Internet Protocol communications. New data was propagated throughout the system within four seconds.

Despite his communications coup, Boutelle said leasing satellites from commercial suppliers should be a one-time event.

"We should be 80 percent on government satellites," he said. "But we don't have a constellation that will support it today."

The plans for a next-generation communications system feature a new constellation of satellites to support Boutelle's vision of an Army run on a pervasive global network.

And AKO is the portal to that network. Warfighters in Iraq used a combination of AKO with the Secret IP Router Network for staff coordination, daily operations briefings and operations notes. AKO with the Non-Classified IP Router Network carried sensitive and unclassified informa-

tion such as soldiers' personnel, medical and financial records and e-mail.

Conceived of as the Army's Enterprise Portal, it is also the central gateway to Army Knowledge Centers.

AKO today has 1.6 million registered account holders, 571,000 documents in its knowledge collaboration centers and serves 594 Army communities, said Howard Tucker, a civilian AKO contractor at Cherry Roads Technologies Inc. of Parsippany, N.J.

AKO has saved millions of dollars in travel avoided and time saved, he said. Soldiers once had to fly into Washington to check their personnel records before Selection Board hearings for promotions, he said. "Now they can stay where they are and do it all online."

As program executive officer for command, control and communications systems at Fort Monmouth, N.J., Boutelle had overseen development of what was to become the model for AKO, a prototype that was never intended to be operational.

But the prototype performed well, and AKO became an Army presence. In late 2001, it was put to a new test.

"About the time of Sept. 11, we were bringing up some of the systems online," Boutelle said, "and the chief of staff of the Army said, 'I want this online, and I want 1.4 million people on it, and I want it operationalized. And by the way, I want you to do one for the secret side as well, the SIPRNET (Secure Internet Protocol Router Network) side.'"

Recalling that period, Cuiello, then Boutelle's boss, said, "He shines in times of crises."

Cuiello added: "He brought the partners together, then came to me and said, 'This is what it will take to do what you want to do.' It meant I could go to [our chiefs] and say: 'This is what it will cost, this is how long it will take, give us your blessing and we'll get on with it.'"

Boutelle and his team ran with it. They took over the backup equipment for the unclassified NIPRNET (Nonsecure Internet Protocol Router Network) version of AKO to run the

Kulifay new Signal Regimental Adjutant



Signal Regiment Leaders, it is with pleasure BG Janet A. Hicks announces COL Bernie Kulifay as the new Signal Regimental Adjutant. Above Hicks makes the presentation.

quickly set up secret version.

Today, Tucker said, "it's growing faster percentage-wise than the unclassified side."

Boutelle has only held the Army CIO command since July 3, 2003; he's just getting started.

OF INTEREST

THINK LIKE THE WOLF PROTECT YOUR CRITICAL INFORMATION WITH AN OPSEC PROGRAM

by Stephen Larsen

We all know what operations security, or 'OPSEC,' is - even if we don't realize it.

You don't just give out your credit card number to a stranger. You

don't randomly tell people your social security number, or your home phone number.

Why? Because these people don't have a need to know this information... and if we give it out carelessly, someone with bad intent could use it to compromise our lives in some way, such as identity theft. So, in our personal lives, we religiously protect this information, carefully considering each request for it and whether the requestor has a legitimate need for it and will protect it.

So why don't we, as members of government organizations, practice OPSEC as religiously on the job?

"We in government agencies shoot ourselves in the foot with information we publish on our Internet websites," said Charlie Reeder, course manager for the Interagency OPSEC Support Staff,

which has the mission to help government organizations develop self-sufficient OPSEC programs and includes representatives from the National Security Agency, Central Intelligence Agency, Federal Bureau of Investigation, Department of Defense, General Services Administration and Department of Energy.

Reeder said he's seen government websites that have included maps of installations... listing of names, phone numbers and room numbers of key officials... locations of organizations and units... specifications of weapons and communications systems... and much more.

"When we publish this information on the Internet, we might as well fax it directly to our adversaries," said Reeder. "Because, in effect, we have. Once it's out there, it's gone. One problem with the Internet is you don't know who's out there, looking at your information."

According to DoD sources, For Official Use Only and other sensitive but unclassified information – such as concepts of operations, operation plans and standard operating procedures – continues to appear on DoD public websites. In 2002, reviewers found more than 1,500 such discrepancies in government websites.

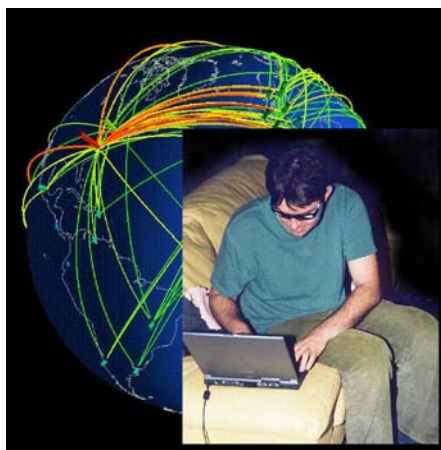
"Our adversaries know and depend on this information," said Reeder.

Terrorists get intel from 'open source' information

According to a message sent by Secretary of Defense Donald Rumsfeld on Jan. 14, 2003, an Al Qaeda training manual recovered in Afghanistan states "using public sources openly and without resorting to illegal means, it is possible to gather at least 80 percent of information about the enemy."

"Open source information is where our adversaries get the bulk of their intelligence," said Harvey Thomas, an instructor with the IOSS. "So why do we keep on giving it to them?"

Internet websites are just one example on the list of open source information, said Thomas, adding to



One problem with the Internet is you don't know who's out there, looking at your information. When we publish critical information on the Internet, we might as well fax it directly to our adversaries, say operations security professionals. In 2002, reviewers found more than 1,500 cases where critical information was posted on DoD public websites.

that list items such as telephone directories, travel orders, job announcements, budget documents and newsletters.

"Our adversaries can take bits and pieces of information from all of these open sources," said Thomas, "and piece it together to form a complete picture."

Five-step OPSEC process

The way to combat such leaks, according to Reeder and Thomas, is establish a formal OPSEC program, employing the five-step OPSEC process.

Step 1. Identify your critical information. Critical information is any information the adversary needs to prevent our success – and that we must protect to ensure our success. Critical information includes items such as capabilities... intentions... times... places... locations... strengths... weakness... technology... and tactics.

Step 2. Analyze your threats. There are two elements of a threat – you must have an adversary with first, intent to do you harm; and second, with the capability to do you harm. If there's a terrorist who wants

to do you harm, but doesn't have the means to get to you, you don't have a threat... but if that terrorist has a friend with the means to reach you – now you have a threat.

How do you get the data you need to analyze your threats? Organizations should get in touch with their intel folks and ask for a threat assessment. Given the changing world situation, you should do this once a quarter – but be as specific as you can be, so you are not inundated with information and get it in a timely fashion.

Step 3. Analyze your vulnerabilities. Vulnerabilities are opportunities for adversaries to exploit your critical information – such as publishing sensitive information on public websites or talking about sensitive matters via cell phones or nonsecure phone lines, which are easily monitored. Often "indicators" can point to vulnerabilities. Did your organization suddenly put a fence around a location where there was no fence before? That can be an indicator that 'something is up' at that location and cause an adversary to take a closer look.

Step 4. Assess your risks. There are three elements to risk, which can be expressed as a mathematical equation: Threat x Vulnerability x Impact = Risk. Without any one of the three – threat, vulnerability or impact – you don't have risk.

Step 5. Apply appropriate countermeasures The fifth step in the OPSEC process is to apply appropriate countermeasures. The nation of India successfully applied OPSEC countermeasures to protect the critical information that they were conducting underground nuclear tests in May 1998. For one, their workers avoided going outdoors at the nuclear test sites at times when satellites were passing overhead. For another, they launched missiles from other sites as a diversion. The result? India totally fooled the U.S., and the rest of the world, when they conducted their tests – other nations knew only after-the-fact, when seismographs picked up the explosions.

Think like the wolf

"You need to look at your organization through the eyes of your adversary," said Reeder. "You need to put on the black hat and ask yourself, 'if I were a bad guy, could I use this information to harm the organization or disrupt the mission?'"

Both Reeder and Thomas agree that, as a start, senior leadership must support OPSEC with policy and the appointment of an OPSEC

program manager. The IOSS, located in Greenbelt, Md., offers courses to properly train personnel involved with OPSEC programs, including these courses: OPSEC Fundamentals, OPSEC and Web Content Vulnerability, OPSEC Practitioner's Course, OPSEC Program Manager's Course, Threat Research for OPSEC Course and OPSEC for Public Safety Course. The IOSS can be reached at 443-479-4677. Their website, <http://www.ioass.gov/>, provides course

descriptions and a schedule of course dates.

"We have an obligation - and the power - to protect our critical information," said Reeder. "We need to start doing it."

Stephen Larsen is the Public Affairs Officer for the Program Executive Office, Enterprise Information Systems at Fort Monmouth, N.J. and the OPSEC officer for the Deputy PEO EIS, Communications.

ACRONYM QUICKSCAN

1MEF — 1st Marine Expeditionary Force
2ID — 2nd Infantry Division
3MAW — 3rd Marine Aircraft Wing
ADA — Air Defense Artillery
AKO — Army Knowledge Online
ALC — Air Logistics Center
ARMS — Armament Retooling and Manufacturing Support
ASD — Assistant Secretary of Defense
ASCP — Army Small Computer Program
ASR — Alternate Support Route
ASA ALT — Assistant Secretary of the Army for Acquisition
B2Bi — Business-to-Business Integration
BIAP — Baghdad International Airport
BRAC — Base Realignment and Closure
C3I — Command, Control, Communications and Intelligence
C4I — command, control, communication, computer, and intelligence
CECOM — Communications-Electronics Command
CJTF — combined joint task force
CNR — Combat Net Radio
CONOPS — Concept of Operations
COMSEC — Communications Security
CRD — Capstone Requirements Document
CY — calendar year
DoD — Department of Defense
DOIM — Directorate of Information Management
EAC — Emergency Action Center
EOC — Emergency Operation Center
EPLRS — Enhanced Position Location Reporting System
ENM — EPLRS Network Manager
ERB — Enlisted Records Brief

FBCB2 — Force XXI Battle Command Brigade and Below
FCS — Future Combat Systems
FOB — Forward Operating Base
FOUO — For Official Use Only
FY — fiscal year
GBS — Global Broadcast System
GCS — guidance and control systems
GIG — Global Information Grid
HFRD — High Frequency Radio Division
HHD — Headquarters and Headquarters Detachment
Humvee — High Mobility Multipurpose Wheeled Vehicle
HRC — Human Resources Command
IDM — Information Dissemination Management
IDM-T — Information Dissemination Management — Tactical
IED — Improvised Explosive Devices
INFOSEC — Information Security
INMARSAT — international maritime satellite
IOSS — Interagency OPSEC Support Staff
IT — Information Technology
JTF — Joint Task Force
JTRS — Joint Tactical Radio System
LAN — Local Area Network
LEN — Large Extension Node
LSA — Logistical Support Area
LW — Land Warrior Future Combat Systems
MEF — Marine Expeditionary Force
MI — Military Intelligence
MIDS — Multifunctional Information Distribution System
MIDSLVT-2 — Multifunctional Information Distribution System Low Volume Terminal — 2
MRE — meals ready to eat
MSRT — Mobile Subscriber Radio Terminal
NCS — Network Control Station
NET — New Equipment Training
NETOPS — Network Operations

NOC — Network Operations Center
NTDR — Near Term Digital Radio
NWS — Naval Warfare Assessment Station
OP — Observation Posts
OPSEC — operations security
ORB — Officer Records Brief
ORD — Operational Requirements Document
PATRIOT — Phased Array Tracking Radar to Intercept of Target
PEO EIS — Program Executive Office for Enterprise Information Systems
PM — Program Manager
PM DMS-A — Product Manager, Defense Message System-Army
PKI — Public Key Infrastructure
PM TRCS — Program Manager, Tactical Radio Communications Systems
Q — quarter
RAU — Radio Access Unit
Recap — Recapitalization
RETRANS — Retransmission Team
RFQ — Request for Quote
RPG — Rocket Propelled Grenades
SBCT — Stryker Brigade Combat Team
SBCT-3 — Third Stryker Brigade Combat Team
SCA — Software Communication Architecture
SETAF — Southern European Task Force
SINGARS — Single Channel Ground to Air Radio System
SSL — Secure Socket Layer
TACSAT — tactical satellite
TOC — Tactical Operations Center
TRCS — Tactical Radio Communications Systems
U.S. — United States
USARHAW — U.S. Army Hawaii
USARJ — United States Army Japan
WIN-T — Warfighter Information Network — Tactical

Doctrine update

Updates in Signal doctrine from Directorate of Combat Developments, Army Signal Center, Fort Gordon, Ga.

A NEW DOCTRINE FOR A NEW DAY

by Russell McCray

On Nov. 9, 1989, the Berlin Wall falls, effectively marking an end to the Cold War and the doctrine formulated for that era. The tragedy of Sept. 11, 2001, quickly brought about a shift in Army doctrine and how the Signal Regiment supports the Army.

The Signal Regiment must blend the technologies of today with a philosophy that supports operations ranging from deterring aggression (homeland defense) to those requiring the Army to amass a force capable of launching a Cold War-style assault against any standing Army (Iraq).

FM 6-02.45 (FM 11-45), *Signal Support to Theater Operations*, updates theater Signal doctrine to support the contemporary operating environment. It is an essential source of information for capturing the changes to joint and Army operational doctrine and support to homeland defense and security. This manual also captures the significant changes in the structure of certain theater signal organizations and provides the roles and responsibilities these organizations perform during the provision of signal support at the theater level.

Notable examples are the reorganization of Headquarters, U.S. Army Signal Command as Network Enterprise Technology Command/9th Army Signal Command; the redesign of the Tactical Installation and Networking Company; the restructuring of the Theater Tactical Signal Battalion Version 2 area and composite Signal battalions, including their functions, into Integrated Tactical Signal Battalions.

NETCOM/9th ASC's new organizational structure is essential to providing the theater commanders,

and in some cases corps and division commanders, the type of command, control, communication and computer information management that assures battlefield success. The centerpiece of NETCOM/9th ASC transformation is the ITSB.

FM 6-02.45 (FM 11-45), *Signal Support to Theater Operations* is an essential source of information for capturing the changes to joint and Army operational doctrine and support to homeland defense and security.

Typically, theater tactical Signal brigades will have an ITSB assigned, although corps and division organizational levels may need ITSB support. The mission of the ITSB is to provide the capability to engineer, install, operate and maintain up to three major and 12 extension multi-functional C4 technology nodes in support of the combatant commanders of unified or specified commands, as well as Army Service Component Command, Joint Task Force or Joint Force Land Component Command commanders.

Each node includes voice switching and data networking capabilities, along with a mixture of transmission systems such as satellite communications, troposcatter and line of sight.

SATCOM systems provide the capability to link back to the sustaining base as well as provide other command and control linkages. TROPO systems provide intra-theater

beyond LOS linkages between key nodes and to other nodes where inter-theater links are consolidated.

SATCOM and TROPO systems are organic to the module support provided to the warfighter as they conduct operations from enclave style deployments on the nonlinear, noncontiguous battlefield. These systems provide the wideband links needed for interenclave communications when deployed at distances greater than the range of LOS systems.

LOS systems remove the artificial boundaries placed by the noncontiguous battlefield and provide in-depth communications access to dispersed headquarters, elements and command posts.

The ITSB is composed of a battalion headquarters and headquarters command and three companies. Alpha or Bravo companies are identical, while Charlie Company is slightly heavier in terms of switching, SATCOM and LOS, as well as having the tactical message services for the battalion and heavy versus light TROPO.

This ITSB is a fundamental shift from battalions containing single function companies (for example, SATCOM or TROPO) and offers more multi-functionality than the theater area Signal battalion, which only incorporates transmission, switching, and systems control assets. The ITSB includes beyond LOS systems, wideband data and computer network management capabilities not present in and/or integrated into the current design.

The multifunctional nodal structure of the ITSB reflects a train-as-you-fight and organize-as-you-fight philosophy. This alleviates one of the greatest difficulties of the current structure, which is to task organize from multiple organizations to form a single communications node to support a single customer

enclave. Additionally, with the ITSB, the entire node is under the command of one organization, which is the same organization that lives, trains, and works together in garrison, field and deployment environments, enhancing unit cohesion and organizational functionality. The ITSB will have the same organizational structure and equipment across the entire force, making replacement and transition of active duty units, modules or personnel with United States Army National Guard or United States Army Reserve forces, or vice versa, a reality, reinforcing the phrase "one team, one fight."

In conclusion, the doctrine

contained in FM 6-02.45 summaries the theater-level C4 information technology common-user services and warfighting forces in support of the Army, its service component commanders, and combatant commanders. The ITSB ensures that the correct information gets to the user no matter who or where they are on the battlefield.

Mr. McCray develops and writes doctrinal literature for the Directorate Combat Developments, Concepts and Doctrine Division, Doctrine Branch, at the Signal Center and Fort Gordon, Ga. He is a 26-year retired Army veteran and a graduate Troy State University, Troy, Ala., with a masters degree in education.

ACRONYM QUICKSCAN

ASC – Signal Command
C4 – command, control, communication and computer
ITSBs – Integrated Tactical Signal Battalions
LOS – line of sight
NETCOM – Network Enterprise Technology Command
SATCOM – satellite communications
TROPO – troposcatter
USANG – United States Army National Guard
USAR – United States Army Reserve

TSM update

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

TSM-SATCOM

MOVING OUT SMART-T...

"Milstar was absolutely critical to mobile operations, both on our naval component for the control and launch of Tomahawk missiles and for our land component, the use of SMART-Ts. For the Marines and the Army, they were key to keeping electronic tethers on some very mobile headquarters."

—BG Dennis Moran, former U.S. Army Central Command J-6

It has often been said that information is fundamental to conducting effective warfare. Army and Marine Forces racing through the Iraqi desert towards Baghdad in support of Operation Iraqi Freedom had the opportunity to find out for themselves how true that simple statement is.

These rapidly moving forces were communicating using a Secure Mobile Anti-Jam Reliable Tactical Terminal, a brand new satellite terminal which had never before been

operated under battlefield conditions. The SMART-T, with nomenclature as the AN/TSC-154, is a joint, mobile, multichannel ground terminal designed to operate with the newest Department of Defense satellite constellation, Milstar. The primary mission of the SMART-T is to support field commanders with global, robust, jam-resistant and secure beyond line of sight communications. SMART-T is the only ground mobile terminal available to utilize the medium data rate payload on the Milstar satellites. The SMART-T provides range extension for the Army Mobile Subscriber Equipment

between selected Node Centers, Large Extension Nodes, Small Extension Nodes and Remote Radio Access Units to support Echelons Corps and Below. The SMART-T also can be used for special contingency operations and is able to operate with other service's Milstar terminals.

"We have had great success with our SMART-T. I can't say enough about



its reliability over the past six months of being online."

—Captain, U.S. Marines, 9th Communications Battalion, Officer in Charge

The SMART-T communicates with the Milstar satellites over the EHF, or protected, part of the frequency band. These terminals can be remotely operated and provide world-wide, jam-resistant, survivable communications. Additionally, SMART-Ts are capable of operating at data rates up to 1.544 megabit per second. The higher data rates mean faster service for warfighters and time is a critical element in combat. Air tasking orders which used to take an hour to transmit can now be sent and delivered in less than six seconds using the technology available with SMART-T and Milstar. Imagery in the form of an 8x10 picture can be sent in two minutes compared to a previous time lapse of 22 hours!

"They're working well and we need them. I have a dozen network shots that wouldn't work without my SMART-Ts based on the distance and terrain we're covering. Also, the troops that are assigned as SMART-T operators like the system. It's easy to use and maintain."

—LTC J. Schleifer, 4th Infantry Division G-6 (former 124th Signal Battalion Commander), Tikrit, Iraq

During OIF, there were a total of 34 SMART-Ts in the theater of operations. The Marines, specifically the 1st Marine Division and the 1st Marine Expeditionary Force, used 13 SMART-Ts to facilitate communications requirements throughout their area of operation. After-action reports stated they could have used more SMART-Ts. The 124th Signal Battalion supporting the 4th Infantry Division in Iraq managed to install, operate and maintain the largest division communications network in the history of the Army thanks to the 14 SMART-Ts dispersed over a 90,000 square-kilometer area of operations. Minimal downtime was experienced throughout the conflict.

"With the Milstar medium-data-

ACRONYM QUICKSCAN

AO – area of operation
BLOS – beyond line-of-sight
ECB – Echelons Corps and Below
I-MEF – 1st Marine Expeditionary Force
LEN – Large Extension Nodes
Mbps – Megabits Per Second
MSE – Mobile Subscriber Equipment
NC – Node Centers
OIF – Operation Iraqi Freedom
RAU – Remote Radio Access Units
SEN – Small Extension Nodes
SMART-T – Secure Mobile Anti-Jam Reliable Tactical Terminal
SOPS – Space Operations Squadron

rate capability, we had the equivalent of 32 T-1 data lines in orbit...it takes just a matter of seconds to get land attack missile target information, or to reprogram a target, or send a mission-target update."

—COL Roger Teague, U.S. Navy, Former 4th Space Operations Commander

"There were SMART-T challenges that we had to overcome but we couldn't have done what we did from Kuwait to Kirkuk without the SMART-T. The 124th Signal Battalion's ability to provide communications in support of the Division Commander's movement was a huge success."

—LTC J. Baker, U.S. Army, Commander, 124th Signal Battalion

Reports continue to pour in from the field about the ease of use, the reliability and quick access that users had in securely communicating under very stressful conditions. It appears that SMART-T has passed its first critical test with flying colors.

TSM-TACTICAL RADIO

TSM-TR UPDATE JOINT TACTICAL RADIO SYSTEM - CLUSTER 5

The overall Joint Tactical Radio System program is run by the JTRS Joint Program Office, which reports to

the Army Acquisition Executive. Individual services and the Special Operations Command are developing subset variants known as clusters. The term clusters refers to the aggregation of all service requirements for radio capabilities within a domain such as ground vehicular, handheld, manpack and so on, under a single acquisition program.

Cluster 1 radios are led by the Army and include ground vehicular and rotary-wing aviation variants. Cluster 2 is led by the Special Operations Command and is under contract for an initial handheld variant. The Navy leads cluster 3, a maritime variant, while the Air Force-led Cluster 4 is exploring fixed-wing airborne platform variants.

JTRS Cluster 5 is led by the Army and will produce the Department of Defense's next generation of tactical systems that support multiple key programs, including Land Warrior and Future Combat Systems.

These programs require manpack and handheld radios used in dismounted Soldier operations as well as small-form factor Soldier radios and embedded transceivers for unattended ground sensors, intelligent munitions, communications relays and missiles. JTRS Cluster 5 will provide seamless communication services to warfighters in operations across the United States military and jointly with coalition and allied forces. The communications capability to be developed via the JTRS Cluster 5 (formerly Cluster X) program will fill radio needs not addressed by the program's other four clusters.

The radios will be software programmable, modular in both hardware and software design and capable of being reconfigured to operate with different waveforms and protocols anywhere in the 2 MHz to 2 GHz band. While this new generation of radios must provide backward compatibility with legacy radios and cryptographic devices, they will also provide the military with many new capabilities.

A new development regarding the JTRS variants will be line-of-sight wireless networking radio capabili-

ties for transmission of voice, video and data to and from any mobile node in the wireless network. A node can be placed on a ship, tank, helicopter, aircraft or other location. Other new capabilities in the offing include automatic network formation and maintenance, automatic relaying to extend the line-of-sight range, independent encryption, and quality-of-service guarantees to each user service (voice, video or data).

The joint services continue to update their JTRS migration plans as additional JTRS clusters become defined and initiated and as service requirements become better defined. Ultimately, legacy radio capabilities will be replaced with JTRS radios that provide network access to tactical and strategic networks. The focus is really on networking and routing rather than on legacy radio replacement.

The Army has structured its program to develop an initial capability for handheld and manpack radios for delivery as early as fiscal 2007. This initial delivery will focus on capabilities that can be quickly developed using technologies available in industry today. The remaining set of capabilities will be delivered in a second increment that fully satisfies the operational requirements called for by the latest version of the JTRS Operational Requirements Document.

The Army faces a number of implementation challenges aside from the requirement for service-wide integration. Some of the challenges are waveform applications, Software Communication Architecture compliance, power amplifiers and antennas. All waveform applications to be ported to the Cluster 5 hardware are being developed under separate contracts. JTRS compliance requires that the hardware and software conform to the rules established in the SCA. Designing a Cluster 5 radio that continues to provide the operating time that users have become accustomed to will be one of the most difficult hurdles to overcome. The Joint Program Office is currently working with industry to understand these implications and to address

whether changes are needed in this area. There is no single-power amplifier or antenna that can support operation across the required JTRS frequency band of 2 MHz to 2 GHz. Initial radios may have to be delivered with multiple antennas or power amplifier modules until such time as technology has been developed to allow operation over the entire band with a single device.

The Cluster 5 program is entering the acquisition lifecycle at Milestone B, System Development and Demonstration. A cost-plus contract will be awarded in 2QFY04 following full and open competition.

Enhanced Position Location Reporting System

The Enhanced Position Location Reporting System fielding preparation continues. NET Contractors completed training of EPLRS Network Manager operators and system planners for Third Stryker Brigade Combat Team Soldiers on Sept. 26, 2003. The training was conducted at the U.S. Army Signal Center and Fort Gordon, Ga. The new material introductory brief to the S-6 (SBCT-3) was completed on Sept. 30, 2003. Initial fielding of assets to support the Signal Company began during the first quarter FY 2004. A newly improved version of the EPLRS Network Control Station was recently fielded to the 1st Battalion, 204th Air Defense Artillery, Mississippi National Guard and the 111th Air Defense Artillery Brigade, New Mexico National Guard. Fielding to the 3-265th Florida National Guard began December 2003. EPLRS is one of the key data communications links used between the ADA sensors and unit weapon systems. The ENM provides greater network management capability and operator flexibility over the current EPLRS network control station. Retrofitting the previously fielded units will begin during the calendar year 2004. EPLRS is presently fielded to the 3rd, 4th and 1st Cavalry Divisions in addition to the SBCT-1 and SBCT-2.

The EPLRS 5th Annual Multi-Service Meeting was held Aug. 20-21 2003, U.S. Army Signal Center and

Fort Gordon. The event featured EPLRS users from across all four military services and discussed system attributes, planned future system enhancements, employment techniques unique to each service and joint interoperability issues.

PM Land Warrior recently selected the EPLRS Micro Lite to serve as its data transport communications link for its 5500 Force XXI Battle Command Brigade and Below terminals. The EPLRS Micro Lite will enable interoperability with today's EPLRS/ Single Channel Ground to Air Radio System tactical Internet. The EPLRS hand-held sized Micro Lite will be used with the new PDA-sized FBCB2 terminals to provide a situational awareness and command and control capability for its Land Warrior leader and soldier platforms. PM TRCS is currently working network impact and grade of service concerns.

Multifunctional Information Distribution System Low Volume Terminal-2

The Multifunctional Information Distribution System Low Volume Terminal - 2 program received approval on Sept. 25, 2003, from the Assistant Secretary of the Navy to proceed into its next phase of development. The favorable decision enables the Army to move forward from its Low Rate Initial Production stage of development and into Full Rate Production. The permission to conduct an acquisition milestone review for Army and Air Force requirements separate from the main Navy-led MIDS Program granted previously enabled this action. Following this decision the PM signed a contract with ViaSat Inc. to procure 23 MIDS terminals for FY04. Service funds identified to purchase terminals for the Army and Air Force programs had to be obligated by the end of fiscal year 2003 or risk forfeiture. The MIDS International Program Office recommended separate reviews earlier this year amid growing concerns that the Army and Air Force programs were being unjustly penalized by negative results received during the Navy's

most recent Operational Evaluation. The Army plans to purchase close to 200 terminals for fielding and integration into several of its air and missile defense system platforms to include recent discussions to pure fleet all of its PATRIOT platforms.

Near Term Digital Radio

The Program Manager, Tactical Radio Communications Systems signed a contract to procure an additional 248 new Near Term Digital Radios. These new systems will be used to fulfill Tactical Operations Center to TOC data transport requirements within the brigades and complete fielding to the 1st Cavalry Division and remaining III Corps units in accordance with the Army Modernization schedule. The contractor plans to deliver 25 systems per month beginning March 2004. However the PM requested the G-8 to hold delivery until March 2004 to better facilitate fielding and enable synchronization with unit schedules. The PM plans to field the NTDRs in brigade-sized unit increments. The NTDR Information Security modules used in the current versions are not interoperable with those installed in the newer versions. The current modules often overheated and many times failed during unit tactical operations and deployment exercises in high temperature environments. The new INFOSEC modules provide greater stability than the current version and provide increased performance. Thus a brigade-sized fielding schema eliminates the possibility of having non-interoperable systems in the same unit.

In addition to new radios, PM TRCS will also begin to take delivery of the new INFOSEC modules targeted to upgrade the current INFOSEC modules used in the NTDR. The PM expects to receive 100 new modules per month, which will help accelerate new unit fieldings and system upgrades.

The PM recently signed a contract with R.A. Miller to redesign the NTDR's spring and antenna base assembly to improve upright performance on mobile tactical vehicles.

The current version proved to be highly susceptible to damage and malfunction due to excessive rapid movement caused by a weak spring and base assembly. The new design is currently in final qualification testing.

TSM-WIN -T

FORGING THE PATH OF ARMY TRANSFORMATION

by MAJ Robert M. Collins

Recently, several key requirement and program strategy documents for the Warfighter Information Network – Tactical system were staffed through a rigorous review, analysis and coordination process. As a result, the WIN-T program received approval by senior Army and Department of Defense Officials for continuation into the System Development and Demonstration phase – forging the path to transform communications in the Future Force.

Progress update

Since the *Army Communicator* Summer 2002 Edition article, the Training and Doctrine Command Analysis Center formally reviewed analytical underpinnings for the WIN-T ORD Key Performance Parameters – Interoperability, Information Assurance, Network Management, Information Dissemination Management, Network Reliability and Mobile Throughput – to ensure each metric is measurable, achievable and operationally relevant. WIN-T Integrated Product Team members, representing a myriad of defense agencies, comprehensively reviewed system documentation to ensure strict synchronization within the Future Force timeline, fielding strategy and functional capability needs. Collectively, the KPP analysis, IPT efforts, Department of the Army and Joint Staff coordination and critical program readiness indicators (funding, technology maturity, schedule) supported a successful Army Requirements Oversight Council, November 2002, and Joint Requirements Oversight

Council, March 2003.

On July 30, 2003, the Milestone B Defense Acquisition Executive Michael Wynne approved entry of the program into the SDD Phase, following a successful Defense Acquisition Board. The program is currently designated as an Army Category 1D major defense acquisition program, based on the total procurement value exceeding \$10 billion. As an ACAT 1D program, the Department of Defense will maintain a high level of visibility and interest in system evolution.

Functional capability

WIN-T will provide the integrating communications network for the Future Force and serve as a core/complimentary system for the Future Combat System. It will deliver reliable, secure, and seamless video, data, imagery and voice services that enable decisive combat actions – optimized for Joint and Offensive operations. The network will enable timely delivery of the Common Relevant Operating Picture, aid situational understanding, and support rapid decision-making required to support warfighting operations – adaptive to dynamic changes in mission, task and purpose.

As the Army's tactical portion of the Global Information Grid, WIN-T enables commanders and leaders to build synergistic organizations that cross echelons, functional areas, commercial/military sectors and national/international barriers. The network will support the employment of virtual command centers and staff elements. Physical collocation will not be necessary to plan and execute an operation. With WIN-T, commanders will command and control the force on-the-move using collaborative planning capabilities and accessibility throughout all phases of an operation (mobilization, deployment, engagement and redeployment).

Fundamentally, WIN-T provides equipment (telecommunications hardware and network operations software) that will serve as the core Tactical Infosphere building-

block. Components will include high throughput transmission systems (terrestrial and satellite), routers, secure wireless local area network capabilities, telephony services (e.g. conferencing, speed dial) and email access/service. A multi-tiered architecture consisting of terrestrial combat systems, airborne vehicles and space-based platforms will enable survivability, flexibility and redundancy. Network components will support the exchange of information across all security classifications, from unclassified through Top Secret. Network Operations capabilities will seamlessly integrate network management, information assurance, information dissemination, knowledge, spectrum and security management functions – federated into a single system, not stove-piped pieces.

Program strategy

Following a full and open competition among U.S. prime contractors the government awarded separate parallel competitive cost-plus-fixed-fee contracts to General Dynamics Government Systems Corporation and Lockheed Martin Mission Systems in August 2002.

Each contract consists of two phases. Phase 1, just completed, supported the successful Milestone B decision and entry into the SDD. Phase 2, currently underway, is the SDD phase and work efforts are those necessary to further mature the system and develop documentation

to successfully achieve a Milestone C Low Rate Initial Production Decision scheduled for 2005. This phase will involve an engineering services provision that will include: engineering studies to assess the impacts of emerging and evolving requirements on the WIN-T architecture and system, fabrication and testing of equipment prototypes (hardware/software) to assess interface, interoperability and other technical requirements. Modeling and simulation will be used to validate that the architecture can satisfy the ORD Key Performance Parameter requirements.

At the conclusion of SDD in 2005, a restricted competition between the two development contractors will result in down-selection to a single production contract award for the initial LRIP quantity, plus options for additional LRIP and Full Rate Production quantities. All efforts are fully synchronized with Future Combat Systems and the Joint Tactical Radio System. Production efforts will be focused on Initial Operation Capability in FY 2009 – consistent with current Future Force fielding plans.

Road ahead

WIN-T concept refinement and program development will continue to evolve in concert with Future Force doctrine; able to maintain synchronization through systematic collaboration and community-wide coordination. We can achieve these advanced

capabilities by challenging both our partners in industry and the DoD technology base to exploit new technologies and achieve scientific breakthroughs. Information has emerged as a key element of combat power in the Future Force; WIN-T will lead the way by enabling the full range of transformational capabilities.

MAJ Collins is currently a student at the United States Army, Command and General Staff College. His previous assignment was Assistant, TRADOC System Manager for the Warfighter Information Network – Tactical, located at Fort Gordon, Ga.

ACRONYM QUICKSCAN

ACAT – Army Category
 CROP – Common Relevant Operational Picture
 DoD – Department of Defense
 FCS – Future Combat System
 FRP – Full Rate Production
 GIG – Global Information Grid
 IPT – Integrated Product Team
 KPP – Key Performance Parameter
 LRIP – Low Rate Initial Production
 NETOPS – Network Operations
 SDD – System Development and Demonstration
 TRAC – TRADOC Analysis Center
 WIN-T – Warfighter Information Network-Tactical

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