

## Inside The Eagle



Employees have relocated to Huntsville due to BRAC, page 9

SMDC/ARSTRAT prepares to celebrate 50th Anniversary

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# The Eagle

U.S. Army Space and Missile Defense Command/U.S. Army Forces Strategic Command

Volume 14, Number 2, February 2007

## *Around the big blue marble in a fantastic flying machine*

By Diane Schumacher  
SMDC/ARSTRAT Public Affairs

**REDSTONE ARSENAL, Ala.** — Army Astronaut Col. Jeffrey N. Williams made an appearance Jan. 26 at the Sparkman Center here to briefly lecture and narrate a few of his 87,000-plus digital photos taken from outer space during his six months on the International Space Station, which concluded Sept 28.

Williams was the primary flight engineer and NASA science officer for Expedition 13 on the ISS.

As Williams began his presentation, he encountered a moment of 'technical difficulties,' as he called it. "Don't you just hate technology?" he asked in a rhetorical tone, causing the audience to laugh. "I can operate a space station but not this," he said, referring to the slide projector.

"Ultimately we go to space to explore it," Williams said. "The plan is to go back to the moon to establish a long-term presence and then go to Mars. The international space station is a stepping stone on our way to Mars."

"It took me about three and half years to prepare and train for this Expedition. I spent about 183 days on the space station and studied the effects of weightlessness for long periods of time among other tasks," said Williams.

Williams told the audience that as he sat in the shuttle waiting for liftoff, he thought to himself, "What am I getting into?" Full well knowing that I would be in space for a long time, and it would be



Photo courtesy of NASA

This overhead image of the Space Shuttle Atlantis, recorded by an Expedition 13 crewmember onboard the International Space Station as the shuttle approached the station, gives an excellent view of the hardware stowed in the cargo bay which will later be used to resume the construction of the orbital outpost during the STS-115 mission.

lonely," he added. To keep his mind off how much he missed his family, he said he usually refocused on his tasks which helped most of the time to quell his feelings of loneliness.

Six weeks into the six-month stay, Williams conducted a space walk. "It took six and a half hours going from aft [back] of the station to its forward," said

Williams. "Because the pressure suit is above five PSI [pressure per square inch], the time spent working outside the station was very fatiguing but the tasks were successful," he said.

It's possible for astronauts to get the bends after a space walk just as SCUBA

See *Astronaut* on page 4



Courtesy photo

## Successful missile defense test takes place off Hawaii

Missile Defense Agency Press Release

Missile Defense Agency Director Lt. Gen. Henry "Trey" Obering announced that a planned intercept test for the Terminal High Altitude Area Defense (THAAD) missile defense element was successfully conducted Jan. 27 at 12:20 a.m. EST (Jan. 26, 7:20 p.m., Hawaii Time) at the Pacific Missile Range Facility on the island of Kauai in Hawaii.

Preliminary indications are that planned flight test objectives were achieved.

This test involved the successful intercept of a "high endo-atmospheric" (just inside earth's atmosphere) unitary (non-separating) target representing a "SCUD"-type ballistic missile launched from a mobile platform positioned off Kauai in the Pacific Ocean. The interceptor was launched

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# The Command Corner



**Lt. Gen. Kevin T. Campbell**  
Commanding General



**CSM David L. Lady**  
Command Sergeant Major

**T**his year is unfolding as one with great challenges for our Nation and Army. During his recent State of the Union address, President George W. Bush communicated to the American people the major security challenges before us. He said the central front of the ongoing Global War on Terrorism, which he described as a “generational struggle,” is being waged in Afghanistan and Iraq and will continue for an extended period. The President also noted, “We’ve met challenges and faced dangers, and we know that more lie ahead.” This State of the Union address was clearly an important communication opportunity for the President to reach out to the American people and explain his vision and priorities for the Nation.

Regardless of the level of command — from a first sergeant talking to his Soldiers to a staff officer briefing her commander — communication is essential to military organizations. Effective and efficient communication is also vital to daily operations of the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (SMDC/ARSTRAT). It is especially important to our ability to fulfill our mission responsibilities in support of the U.S. Army and U.S. Strategic Command (USSTRATCOM). Three over-arching reasons drive this importance:

#### **Communication is vital to our support of mission requirements.**

Supporting the Army during a time of war requires delivering responsive and operationally relevant capabilities to our warfighters. This requirement for operational responsiveness is now counted in seconds and minutes, not days, weeks or years. Every millisecond counts when events in one part of the world can have implications seconds later on the other side of the globe. Communication is frequently both the means and ends of these capabilities.

There is a delicate balance between information accuracy, which is important in our current environment, and timeliness, which can be even more important. In fact, Gen. James Cartwright, commander, USSTRATCOM, provided the context to the requirement by stating, “If commanders wait for perfect information today, their responses could be irrelevant. Information must move at the speed of light.” We provide both the “hardware” and “software” of communication. Our support to tactical commanders in both areas is essential.

This year will bring great change for the SMDC/ARSTRAT, particularly regarding realignments and restationing in support of the Base Realignment and Closure actions. These moves will ease many of the current challenges caused by geographic dispersion. Relocating our headquarters activities to Redstone Arsenal also enhances synergy with other members of the missile defense community and our technology base in the Huntsville area. It is important this move be both transparent and seamless. Continuous, accurate, and timely communication will be key to success.

#### **Effective communication is more than exchanging information. It requires tools, processes and venues.**

Thomas Friedman, in his book, *The World Is Flat: A Brief History of the Twenty-first Century*, takes the position the world has become “flat” in the sense that global changes have been made possible through intersecting technologies, particularly the

See **Communication** on page 3

**I**t has been almost a year since the Vice Chief of Staff of the Army approved the two critical recommendations of the Army Space Cadre FORMAL (Force Management Analysis): That the Army Space Cadre consist of two distinct groups of Soldiers/civilians (Space Professionals, who are career space specialists, and Space Enablers, who are assigned to positions whose primary career field is not space, but who perform tasks or functions that apply space capabilities), and that an Army Space Cadre Office be established and assigned responsibility for implementation and management of the Army Space Cadre. This article will review the progress of the last year in implementing these decisions.

It has been agreed that the ASCO will only manage the life-cycle of the Space Professional (and maybe not all of those). Career and life-cycle management of the person filling the Space Cadre position will remain the responsibility of the branch assignment and proponent offices (including the FA 40 office). The ASCO’s function is tracking and reporting only. It will track the space-experienced military and civilian personnel and report vacancies and pending losses to the branch assignment offices.

Establishing the Army Space Cadre will take place over four implementation phases: 1) The ASCO will stand up and begin planning. 2) Army Space Cadre positions will be identified and documented on MTO&Es and TDAs (the manning and equipping documents for all Army organizations). 3) Training for the Space Enabler positions will be identified and developed. 4) Space Cadre personnel will be identified and tracked against Department of Defense Space Cadre metrics.

ASCO (Phase one) is developing from the FA 40 Proponency Office, but will be distinct from the FA 40 Office (we must avoid any perception that ASCO is an assignment office). By the end of FY07, the office is to be up and running, although probably not fully resourced (as the Arlington HQ moves to Huntsville, all of the DA civilians and contractors will leave the FA 40 Office, and that organization must be completely rebuilt).

Phase two begins this spring: Position identification rules must be developed and accepted by the Army; branches and organizations must nominate their Space Cadre positions; positions must be adjudicated and documented. SMDC/ARSTRAT intends to complete this phase task by late spring-summer 2007.

Phase three continues the work done over the past three years, as Space Job/Task analysis must continue in order to develop the training to support emerging capabilities. Within SMDC/ARSTRAT, two new organizations have been activated to provide commercial exploitation and space control capabilities. The critical tasks performed in order to provide those capabilities must be analyzed and documented. As organizations outside of SMDC/ARSTRAT identify their Space Cadre positions, their tasks must be analyzed as well. That effort will continue into 2008 and probably longer.

Phase four will probably not commence until 2008, awaiting phases one and two before it can even begin to be implemented.

Hard work has been done to make the Space Cadre a reality, and to meet the standards set for all of the services by Congress and DoD. SMDC/ARSTRAT FA-40 Proponency Office and Directorate of Combat Developments have done well in creating the plans and programs which won Army approval in 2006. If SMDC/ARSTRAT can create the Space Cadre Office in the midst of the BRAC moves, and this office can sustain an effective partnership with DCD, then the Army Space Cadre will be a reality in 2008.

**ON POINT!**

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**Communication**

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Internet. Friedman also notes easy access to vast amounts of information has produced a global, Web-enabled playing field that allows for multiple forms of collaboration without regard to geography or distance. Building a collaborative approach is required to prepare for both expected and unexpected threats. However, developing this collaborative approach requires new concepts, organizations, and training methodologies.

USSTRATCOM's development of the Strategic Knowledge Integration Web (SKIWeb) combines aspects of instant messaging services, chat rooms, and blogs to enable warfighters of all ranks and responsibilities to share ideas and enhance collaboration. USASMDC/ARSTRAT is working closely with USSTRATCOM to develop a SKIWeb portal for this command. This initiative is expected to enhance our operational processes, allowing concurrent vertical and horizontal planning, communication, and access to near real-time mission-related information. This will also shorten planning times and enhance responsiveness. Leaders and planners throughout SMDC/ARSTRAT should

familiarize themselves with SKIWeb if they have not already gained the appropriate access.

**Effective communication requires access control.**

To be effective, communication must flow upward, downward and laterally throughout the organization; however, technology proliferation and ready Internet access pose significant threats to our computer systems and networks. To an increased degree, these threats include individuals and groups, transnational actors, and nation-states with malicious intent. It can also include our own inattention and noncompliance with proper procedures when working on government information systems.

We have implemented, and will keep implementing, appropriate steps to enhance the security and stability of our automation systems. An essential component for enhancing security awareness is effective training. Two training modules recently disseminated throughout the command are important steps in this direction. The training module "Mandatory Training for Spear-Phishing Situational Awareness" was developed by the USSTRATCOM Joint Task

Force-Global Network Operations (JTF-GNO). It contains useful information on one of the fastest growing social engineering threats facing information systems. The training module "Information Security and Spillage Prevention," disseminated by the USASMDC/ARSTRAT G-3, has been developed to support our Information Security program.

In closing, since joining the command, I have visited several locations where the SMDC/ARSTRAT team is doing so much to bring cutting-edge technology and space-based products and services to America's joint warfighters. Our Soldiers are also at the front line ensuring our Nation, allies, and deployed forces are defended against the scourge of accidental or intentional limited ballistic missile attacks. At each stop, I have been impressed with the extraordinary professionalism and dedication displayed on a daily basis. I congratulate you for your selfless efforts during this important time of great challenges. I look forward to visits in the near future to all locations where we have members of the SMDC/ARSTRAT team working in support of our Nation's security requirements.

**SECURE THE HIGH GROUND!**

# What We Think

*If you had to vote for one of the following issues and against the other, how would you vote and why?*

**The Eagle asks:**

- **More ordinances against public smoking**
- **Find homes for our country's estimated 744K homeless people**



If I had to vote for either the issue of more ordinances against public smoking or to find homes for our country's estimated 744K homeless people, I would vote for finding homes for the homeless people. There have been numerous reports announced to the public educating individuals concerning the hazards of smoking. Everyone knows the health risk that is involved with smoking, so why continue to pour money into a subject that has been well addressed. I feel everyone should have a safe place to call home and should have the opportunity to have shelter for them and their families. To me, this is the right humanitarian thing to do.

Vivian M. Gordon  
Administrative Assistant  
Training and Exercise Branch  
G-3  
Colorado Springs, Colo.



The issue of homeless Americans is far more important than more attempts to stop people from smoking in public, there's enough information out on that. There are too many homeless people in America, and the American Congress needs to pay attention and help these people. I firmly believe many of us are just a paycheck away from being homeless because we don't have savings or job security. By reducing the amount of funding being provided to other countries, we should be able to use such funding to provide assistance to our fellow Americans. We should look at home before assisting others in rebuilding their countries.

Nikol Van Epps  
Administrative Assistant  
G-2  
Huntsville, Ala.



I would vote for more stringent ordinances against smoking because smoking is one of the leading killers and causes of ill-health in America. I would favor even higher taxes and costs to purchase tobacco products. Recently, it's been proven that cigarettes now have an increased nicotine content — making them even more addicting and equivalent to illegal drugs. Cigarettes are a killer and should have extreme ordinances to the point that people will want to quit.

Maj. Kyle Zablocki  
Communications Officer  
100th Missile Defense Brigade  
(Ground-based Midcourse Defense)  
Colorado Springs, Colo.



Actually I am for both, however the question was "If you had to vote for one of the following issues and against the other, how would you vote?" I would vote for finding homes for our homeless — we should take care of our fellow man.

CW2 Anita Thompson  
Communications Warrant  
100th Missile Defense Brigade  
(Ground-based Midcourse Defense)  
Colorado Springs, Colo.



I would vote to provide housing for the homeless. With standards, we could assist families until they can function again. A civilization is judged by how it treats its most disadvantaged people.

John W. Davis  
Intelligence Operations Specialist  
G-2  
Huntsville, Ala.



I would vote on the issue of finding homes for the homeless. With the disasters on the Gulf Coast and most recently in Florida, homeless people are provided only temporary housing and then are left on their own. Families of today cannot match the families of old, in looking out for homeless family members. With the money we are spending on the wars around the world, surely the U.S. government could find the funds and resources to get our homeless on their feet again.

Will Dennis  
Alternate Foreign  
Disclosure Officer, G-2  
Huntsville, Ala.

## SMDC/ARSTRAT employees receive awards at luncheon

By Diane Schumacher  
SMDC/ARSTRAT  
Public Affairs

**HUNTSVILLE, Ala.** — One of the main purposes for the Air, Space and Missile Defense Association's annual membership luncheon on Jan. 18 was to recognize exceptional achievements by federal government and industry employees in the space and missile defense arena. Three employees from the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command received awards. They are:

Kaye Blankenship,

Technical Center Space Division, received a 2006 Space and Missile Defense Technical Achievement Award in the government category from ASMDA for the programmatic and technical management of the Overwatch Advance Concept Technology Demonstration, which resulted in the first prototypes of this weapon detection system being delivered in 2004 and 2006.

Leon Riley, Technical Center Office of New Initiatives, received from ASMDA a 2006 Space and Missile Defense Service Excellence Award in the government category for

managing the Tracking and Pointing technology program for space-based directed energy weapons. This technology supports the research of smaller, lighter and more fuel efficient military hardware that operate with reduced logistics requirements and for managing the electromagnetic capability and nuclear effects qualifications programs.

Andrea Weathington from the Technical Center Operations Division also received a 2006 Space and Missile Defense Service Excellence Award in the government category. She received the award for helping to develop the

technical center's Lab of the Year assessment package and for helping to focus goals, objectives and action plans for the technical center to address space and missile defense technology needs of the warfighter.

Lt. Gen. Kevin T. Campbell, commanding general of SMDC/ARTSTRAT, presented the awards to these employees and four others from various industry organizations as Larry Burger, the newly elected President of ASMDA, read certificate citations. Burger is also the director of SMDC/ARSTRAT's Future Warfare Center.

## Astronaut

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divers can develop when ascending too quickly from ocean depths, Williams said. To prevent that, they exercise and breathe 100 percent oxygen to get nitrogen that has built up during the space walk out of their bodies, he explained. They try to exercise every day to keep muscle tissue in good condition, he added, but sometimes they are so busy they don't get to it. However, exercise is always conducted after a space walk so the bends don't develop, he continued.

After being on the space station three months with Russian Cosmonaut Pavel Vinogradov, expedition commander, six astronauts arrived at the space station via Space Shuttle Discovery. They brought equipment, supplies, and a freezer that went to -97 degrees Fahrenheit to store blood samples, other fluids and various items that needed refrigeration or freezing.

"We were happy to see them," said Williams. "It's like having relatives come to visit; you're happy to see them when they arrive but it's good to see them go. It took weeks to clean up the mess when they left," he said as he smiled at his audience.

German astronaut Thomas Reiter, who arrived with Space Shuttle Discovery crew, remained on board the ISS when the Discovery crew departed. Reiter was the second flight engineer for the expedition taking place aboard the ISS while Williams was there.

On Sept. 11, 2006, the crew on Space Shuttle Atlantis arrived at the ISS. Their purpose was to work on the solar ray panels and test a rotary joint, said Williams. He helped with assembly operations as well. The day the Atlantis crew left the ISS for return to earth, Williams and Vinogradov also left the space station for return to Earth, but in a Soyuz spacecraft.

"The landing was very bumpy," said Williams. The Russians still use Soyuz capsules to return their astronauts to the earth instead of a shuttle type spacecraft. Instead of landing in oceans as was the method in the 1960's and '70's, the capsules still deploy a parachute and land on ground.

Since the Soyuz crafts deploy parachutes to help with the landing, "they say capsule landings on the ground are soft," Williams said. "It's not a soft landing, it's rough," he added, "It's like being in a car wreck; it's really rough."

Upon completion of his lecture, Williams then presented another slide show, this time to show more of the 87,000-plus photos he took.



Photo by LuAnne Fantasia

Col. Jeffrey N. Williams, an Army astronaut, signs a photo for John King, an AMRDEC employee whose son, a Class of 2010 West Point cadet, had the opportunity to speak with Williams on the International Space Station through a classroom interchange. Williams returned in September 2006 from a six-month stay on the ISS, where he was flight engineer for Expedition 13.

One of the many things Williams did while on the ISS was take photos of Earth, the atmosphere, the moon and of course space. "This is called Earth observation," he said.

"The view is incredible," said Williams. "Traveling around the globe every 90 minutes provides lots of opportunity to see the oceans, thunderstorms, geography, cloud formations, city lights and so many other things in great detail."

Using a Nikon digital camera with an 800mm lens, Williams captured colorful sunsets and sunrises, layers of Earth's atmospheres, reflections of oceans, Caribbean reefs, Australia's Great Barrier Reef, the Missouri River, Crater Lake in Oregon, oil fields in the Sahara Desert, the Pyramids in Egypt and so many more locations on Earth. Earth did look like a big blue marble in many of the photos.

Two important photos Williams took were of a volcano erupting on an Aleutian island. He called Houston Control to pass on the information of what he was watching and was told the information would be relayed to the organization in charge of watching and logging erupting volcanoes in Alaska, he said.

A few minutes later Williams received a call from Houston and was told, "the lady taking the call must think it's a prank because she was extremely calm when she was told about the eruption. She did a

volcano Google search, but said there was no data coming in yet," said Williams.

After a few calls from Houston to 'the lady,' Williams said he decided to call her himself. He was connected to her and introduced himself, he said. "And she was still reacting calmly to the news about the eruption," he added. Williams said he couldn't understand her demeanor so he said to her, "look, give me your e-mail, and I will e-mail the photos to you myself." When I said that, she realized everything was legit, and she lost her cool," said Williams, smiling.

The photos were e-mailed, and he spoke to her again, "this time she was excited, a reaction I had expected the first time she was called. Plus the data from machines had begun to come in," he said.

When the space station came over the Aleutian Islands about an hour later, skies were clear, and there was nothing to be seen from space of a volcano eruption. "The plume of smoke was gone — it was just a burp on the island of Cleveland in the Aleutians," Williams said.

"I felt kind of good knowing that I was the first to know that a volcano had erupted," said Williams, smiling again.

At the conclusion of his lecture and slide presentation, Williams took questions, most coming from three children who had told him earlier they wanted to be astronauts.

# CG speaks at ASMDA annual membership luncheon

By Diane Schumacher  
SMDC/ARSTRAT Public Affairs

**HUNTSVILLE, Ala.** — A month after taking command of the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, Lt. Gen. Kevin T. Campbell spoke to members of the Air, Space and Missile Defense Association during their annual membership and awards luncheon in Huntsville Jan. 18.

Campbell spoke to an audience of more than 500 military, government and industry leaders during the luncheon at the Von Braun Center.

Campbell's remarks focused on the best support possible SMDC/ARSTRAT can provide to Army warfighters. He mentioned there are about 236,000 Soldiers deployed worldwide. In Iraq and Afghanistan alone, there are about 120,000 with tens of thousands more on the way, he said.

He spoke of the Commander in Chief's plan to send more troops to Iraq and what a hard road it will be in deciding which of those units already deployed and returned to their homes will have to be deployed again. Despite those difficult decisions, one thing is clear, "what ever systems will be used [by the warfighter], those systems have to be responsive to the commander who is fighting that battle," said Campbell.

"I think what is certain about the future is that there are uncertainties," Campbell said. "We are going to have to be prepared for them [uncertainties]. We don't know how long this will last. To prepare, we will have to build some capabilities that are scalable which can reach a point defense all the way to a global defense so we can react when there is a threat," he added. Campbell said he thinks everyone will be surprised with the results.

"We have to have some precision, whether it's a 500-pound bomb or intelligence, reconnaissance, or surveillance to find the enemy," said Campbell. "I'm talking about finding an

enemy down to the entity level, whether it's a vehicle or a human being. We need precision."

The systems warfighters will use must be enduring in harsh environments, whether the environment is electromagnetic or kinetic, Campbell said. He stressed that the systems have to be able to last for long periods of time. "They have to endure," he said.

Campbell pointed out that one lesson learned in Iraq is that those who support the warfighter must operate faster so Soldiers can operate faster. "We've learned from Iraq that our opportunities are fleeting when we go after high value targets," he said.

"I've seen [the results] of what some of our Special Forces are doing and the connections between the intelligence and the shooters on the ground. It works very well," said Campbell.

Campbell compared the success of the warfighters to that of running a business. To ensure a business will succeed, the owner must focus on it every waking moment, making sure he is responsive to the needs of his customers to capture and keep their business. It will take sensible ideas, time and money, but the business could be a success.

"In the field, men and women focus 24 hours a day, seven days a week really focusing on the enemy to capture or kill the high value target," he said. "So whatever we do, our systems will have to be that responsive.

"Support has to be assured and I need to be able to count on it when I need it, otherwise utility goes to zero," Campbell said. "So that's a challenging proposition to get things on time where they're needed. It takes a lot of time, brains, and money to make it all work."

Space plays a large role in support to the warfighter. For example, it's critical that satellites transmit enemy position data to a Soldier's handheld global positioning device so he can call in an air strike. It's

critical that his GPS device works — this is just one area where space plays a very important part on the battlefield.

"We can say that space has the potential to provide timely information, but we don't always realize it," said Campbell. "Sometimes people in Washington have information that the commanders on the ground don't have. We have to work hard to make sure that the right people are getting the right information at the right time."

Continuing, Campbell asked the audience, "So how do we help tactical commanders? What do we need to do?" He said that SMDC/ARSTRAT needs to "continue to provide trained and ready Soldiers who know how to operate these space systems and can be inserted into the force to provide support to the ground based commanders."

Much progress has been made by the command in standing up space support teams, Campbell said. Embedding space support teams into various units in the Army seems to be working well, he added. Now ground-based commanders have space Soldiers whose expertise will help warfighters meet and beat the enemy.

Space operations officers, also known as functional area 40 (FA 40), are filling key positions around the Department of Defense, said Campbell. There are FA40s in the National Aeronautics and Space Administration (NASA) and in the Air Force Space and Missile Center in Los Angeles.

The command currently has five astronauts working at NASA; they are FA40s. One of those Army astronauts, Col. Jeffrey Williams, returned from six months on the International Space Station Sept. 28, 2006.

"We are trying to put people in places where they can really have an impact to shape what's going on in space," he said.

Campbell closed his remarks by asking audience members to continue praying for our nation's Soldiers.

## THAAD

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from the THAAD launch complex at PMRF.

Primary flight test objectives included demonstrating successful missile launch from the PMRF launch site; interceptor seeker characterization (target identification), discrimination and intercept of a non-separating liquid-fueled target; and collection of data including missile aimpoint, ground equipment and radar tracking/target discrimination and hit assessment algorithms, and evaluation of the missile launching procedures and equipment.

This was the first test of the THAAD system at PMRF since equipment was moved to the range in October 2006.

For the first time, Soldiers of the 6th Air Defense Artillery Brigade stationed at Fort Bliss, Texas, operated all equipment during the test, conducting operations of the launcher, fire control and communications and radar. Their interaction with the complete THAAD system provided valuable test and operations experience for

the Soldiers and contributed to the operational realism of the test.

THAAD is the first weapon system with both endo-atmospheric (inside the atmosphere) and exo-atmospheric (outside the atmosphere) capability developed specifically to defend against short, medium and intermediate range ballistic missiles. The THAAD system will provide high-altitude missile defense over a larger area than the complementary Patriot system, and like the Patriot, intercepts a ballistic missile target in the "terminal" phase of flight — the final minute or so when the hostile missile falls toward the earth at the end of its flight. THAAD uses "hit to kill" technology, using only the force of a direct impact with the target to destroy it.

This was the second successful intercept for the current THAAD program in three tests, including a test conducted in September 2006 at White Sands Missile Range, N.M., that was not completed due to a failure of the target missile after it was launched.

The Ballistic Missile Defense System now in development and testing will be capable of providing a layered defense for the U.S. homeland, its deployed forces, friends and allies against ballistic missiles of all ranges in all phases of flight. The higher-altitude and theater-wide protection offered by THAAD provides more protection of larger areas than lower-tier systems like Patriot alone. THAAD can be transported by air to wherever it is needed worldwide, and consists of radar, fire control unit, missile launchers, and interceptor missiles.

The THAAD Program is managed by the Missile Defense Agency in Washington, D.C., and

executed by the THAAD Project Office in Huntsville, Ala. Lockheed Martin Corporation is the prime contractor.



Courtesy photo

A successful intercept test for the Terminal High Altitude Area Defense (THAAD) missile defense element is conducted at the Pacific Missile Range Facility on the island of Kauai in Hawaii Jan. 27.

# Army provides produce for Marshallese neighbors

By Alan Taylor, SMDC/ARSTRAT RMI Relations Specialist

**KWAJALEIN ATOLL, Republic of the Marshall Islands** — School children, community organizations and churches on the tiny island of Ebeye located in Kwajalein Atoll, Republic of the Marshall Islands, were recently the happy recipients of fruit and other food items that were donated by the U.S. Army Kwajalein Atoll.

As part of USAKA's engagement activities designed to promote good-will, positive community relations, and international cooperation, the USAKA Directorate of Host Nation Activities coordinates the donation of excess food to Ebeye. The neighbor island is three miles north of Kwajalein.

One recent distribution took place Oct. 18. Kwajalein Range Services (KRS), the prime contractor for USAKA, delivered 15 pallets of boxed apples, pears and oranges. This fruit was not going to be issued to the USAKA retail stores.

This team effort by USAKA and KRS was particularly significant as Ebeye is home to more than 1,000 Marshallese employees of USAKA. This fruit represented a major contribution to their diet and that of their families.

The KRS warehouse manager began the process by identifying excess food items. He then requested permission to donate the food items, and they were transferred to another warehouse, where food safety experts inspected and signed off on the quality of the food. USAKA contracts office approved the transfer, and then the real fun began.

The USAKA Host Nation Activities Office, working with RMI national government representatives on Kwajalein and local government representatives on Ebeye, coordinated the transportation of the food. This involved requesting a boat



Photo by Alan Taylor

Ebeye residents receive food donations from USAKA. Ebeye is home to more than 1,000 Marshallese employees of USAKA. This food represents a major contribution to their diet and that of their families.

and large forklift to take the palletized fruit over to Ebeye. Once at Ebeye, the food was transferred to waiting stake trucks and taken to the community center, which was built as a Humanitarian Assistance Project by the North Carolina National Guard in 2000. Food was divided equally, as USAKA Host Nation Activities representatives and RMI National government representatives ensured that each school received a prorated share of the apples, pears and oranges. A separate share of fruit was also presented to the Iroj, or traditional chief, as a customary gift.

Children and representatives from churches and schools expressed their gratitude. Ebeye Public School Principal

Carl Jeadrik said, "We are really very grateful for this donation of food. *Kwo kainuj in emol*" (Thank you very, very much).

In the most recent transfer which occurred in mid-December, USAKA donated 10 pallets of flour, crackers, apple juice and diet soda just in time to feed the dancing groups, or *Jeptas*, that perform at all of the churches on Ebeye during their Christmas celebrations. This was a particularly appreciated gesture given the close proximity to the holiday season.

As Charles deBrum, mayor of Lae Atoll, patted one of the pallets of food and looked toward the heavens, he said "God knew exactly what we needed, and he delivered it."

## Fiber optics offers new capability at Reagan Test Site

By Paula Y. Taylor  
SMDC/ARSTRAT

A new undersea fiber optic cable from Kwajalein to Guam with a direct link to the United States will enable United States Army at Kwajalein Atoll, Reagan Test Site, or USAKA/RTS, to distribute mission operations and personnel positions back to Huntsville, Ala.

Located in the Republic of Marshall Islands, USAKA/RTS principal mission areas are primarily ballistic missile defense testing and space surveillance operations. The U.S. Army Space and Missile Defense Command/Army Forces Strategic Command is the Army's proponent for space and missile defense and is responsible for the operation of Reagan Test Site and other facilities located at Kwajalein Atoll.

Presently, the supporting contracted non-military workforce is comprised of approximately 2,000 employees and family members. More than 1,000 of the USAKA workforce are Marshallese citizens who commute three miles by ferry daily from the

intra-atoll island of Ebeye to Kwajalein.

In an interview for the Kwajalein command newspaper, Col. Beverly Stipe, the former commander of United States Army at Kwajalein Atoll, said the command took a substantial budget cut in 2004.

An independent assessment team was formed to help develop initiatives to cut costs without negatively impacting current missions at RTS. The team determined that the way ahead rests in the technology and the proven benefits of fiber optics, according to Stipe.

Equipment installed at the test site includes various tracking radars, stationary and mobile telemetry, optical recording equipment and a secure intra-atoll fiber optic data network via submarine fiber optic cables. The Reagan Test Site also serves as a space launch complex, as a tracking station for manned space flight and NASA research projects.

Fiber optics (optical fibers) are long, thin strands of very pure glass about the diameter of a human hair. They are arranged in bundles called

optical cables and used to transmit light signals over long distances.

Optical fiber systems have many advantages over satellite-based communication systems — the most noteworthy of which is its wide bandwidth and low data latency. The key advantages of long haul undersea fiber over geosynchronous satellite is the significantly higher bandwidth (more data) and low data latency (shorter path/ near instantaneous).

More bandwidth will allow for massive amounts of mission data required for running missions in the new operations center in Huntsville.

The low data latency advantage is due to the shorter terrestrial fiber path versus the long satellite path to a satellite 93,000 miles in space.

Near instantaneous data is essential for command and control of flight test missions as well as control of remote range sensors and the space surveillance mission. In addition, fiber is not affected by atmospheric conditions and is more secure. Emerging technologies promise even greater distances

in the future.

The success of the relocation initiative to Huntsville involves using the concept of distributed operations — a remote capability that enables authorized, geographically dispersed users to gain secure access to a common set of data files.

USAKA/RTS is implementing distributed operations in three phases:

- Phase 1: Kwajalein Modernization and Remoting: The goal of this successfully completed phase was to provide the enabling architecture via fiber for future distributing operations to the mainland. During this phase, a fiber-optic network was installed locally throughout the command's key range operations, which included establishing remote operations capability from Roi-Namur to Kwajalein.
- Phase 2: Demonstrate Distributed Operations in Huntsville: During this current phase the Army will attain fiber optic connectivity from Kwajalein and to the Continental United States

See *Fiber Optics* on page 7

# Space Operations Officer Qualification Course earns full accreditation, Institution of Excellence award

By LuAnne Fantasia  
SMDC/ARSTRAT  
Public Affairs

**COLORADO SPRINGS, Colo.** — It took three years and a lot of hard work by many caring people, but the command's Space Operations Officer Qualification Course was awarded full accreditation in December by the U.S. Army Training and Doctrine Command, as well as the Institution of Excellence award.

"We are an Army school ... but *not* a TRADOC school," said Tom Coleman. "We're not required to go by TRADOC standards, but we've always followed those standards and wanted their accreditation."

There are 24 standards in three categories: conduct of training, training support and proponent functions. "The Institution of Excellence award requires a 100 percent rating, which we achieved," Coleman said.

Coleman is chief of the curriculum and faculty development for the Future Warfare Center's combat development directorate. With a master's in personnel management and more than 23 years in uniform, he retired from the Air Force in 1994 as chairman of the Evaluation Department at the Air University, Maxwell/Gunter Air Force Base, Montgomery, Ala. Prior to that, he was a senior Aerospace Science instructor in the Junior Reserve Officer Training Corps, or JROTC, and a full-time instructor as well as assistant director of faculty development at the U.S. Air Force Academy.

He is one of five members of the cadre for the 11-week course in Colorado Springs, all of whom are Army instructors with education backgrounds who have attended the Army Instructor Training Course. Guest instructors teach specialized skills.

"Sometimes TRADOC doesn't accredit their own schools," Coleman said, "and they didn't cut us any slack. The accreditation team said we exceeded their standards."

Two courses are offered back-to-back each fiscal year. "We average 40 - 50 students

in each course; mostly Army officers. But, if there are empty training seats, we offer them to our sister branches of the military," Coleman said. "So, the school isn't considered 'joint' but we are 'purple' sometimes, with service members from the other branches graduating our course."

The 11-week course is split into two phases; the first four weeks are foundational training with the Air Force's National Space Security Institute Space 200 course, taught by both Air Force and Army instructors. The remaining weeks, Army officers have Army-specific application-level training. Both phases of the course offer a broad perspective of the joint field environment.

During Phase II, performance-based tests require students to simulate performance on critical tasks. "We have critical task selection boards every year with a board of representatives

from units with space-related operations," Coleman explained.

Phase II culminates with a command post exercise, or CPX, in which a general officer and a group of veteran officers, newly-returned from a theater of operations, evaluate the class's overall CPX performance.

"The amount of planning involved to ensure the CPX is reflective of today's contemporary operating environment makes this exercise a model of excellence," the TRADOC team said in its accreditation critique.

Much of the course is about leadership. In its after-action review, the accreditation team noted that "... performance-based tests in each course phase provide numerous opportunities for students to assume leadership roles; instructors rotate all students through the positions of class leadership, as required ... providing all students equal time to lead, regardless of

rank."

FA 40 officers attend the course in a temporary duty status, in transit to their next permanent duty station.

## TRADOC operates 33 schools, centers

- 1,714 courses
- 187 in direct support of mobilization
- 391 language courses
- 451,682 seats for:
  - 399,406 Soldiers
  - 29,238 other-service personnel
  - 6,723 International Soldiers
  - 5,827 Army civilians



Photo by Ed White

An average of 40-50 Army officers graduate from each Space Operations Officer Qualification Course each year. The 11-week course is offered twice a year in Colorado Springs, Colo., for FA40 officers in transit to their next permanent duty assignment. After a three-year process, the course earned full accreditation status through the U.S. Army Training and Doctrine Command in December and received the Institution of Excellence Award. SMDC/ARSTRAT is the only non-TRADOC school to be accredited by TRADOC — with a 100 percent accreditation rating for the GMD Operator Course and for the FA40 Course.

## Fiber Optics

continued from page 6

(CONUS). Additionally, the Kwajalein Space Operations Control Center was established at SMDC/ARSTRAT in Huntsville.

- Phase 3: Mission Capable Distributed Operations-FY08 and Beyond: The final phase is the realization of space and

missile testing operations from the United States, where all of the appropriate functional and technical staff will be relocated. Additional benefits for the customer will be the ability to access critical mission data from CONUS and the reduction of customer travel costs to Kwajalein.

Total cost of this initiative is expected to be \$55 million, with \$6.3 million per

year being allotted for lease of the required bandwidth annually for 15 years. USAKA/RTS is committed to moving the majority of the operational mission to Huntsville, where it will be a valued addition to the hub of the Space and Missile Defense Command System Integration, Test and Evaluation Directorate.

# 49th gives 'new' Soldiers taste of national mission

By Sgt. Jack W. Carlson III  
Unit reporter

**FORT GREELY, Alaska** — Fifteen "new" Soldiers arrived here Dec. 1 as part of the Alaska Army National Guard Recruit Sustainment Program. The program helps train-up Soldiers who've already completed Basic Training, but not yet attended Advanced Individual Training.

That chilly Friday night brought them to Fort Greely in their extreme cold weather gear; the recruits knew that their drill weekend was going to be much different than what they'd previously been used to.

"A typical drill weekend for our recruits covers basic Soldier training such as Common Task Training. Being able to train boots on the ground with an active unit is a real benefit," said Sgt. 1st Class William Giese, Team Central Recruiting and Retention noncommissioned officer in charge.

Soon after waking Saturday morning, the recruits found themselves doing physical fitness training with Soldiers of Alpha Company, 49th Missile Defense Battalion, (Ground-based Midcourse Defense). Alpha Company is charged with securing and defending the Missile Defense Complex, which the new Soldiers would see after lunch.

Following a series of in-briefings from the command element of the 49th, the Soldiers headed out for the trip to the MDC. Once they finished the standard tour of the complex, the on-duty military



Photo by Jack W. Carlson III

Soldiers with the Recruit Sustainment Program arrive at Fort Greely for their first iteration of training with the 49th Missile Defense BN (GMD) Alaska Army National Guard.

police officers gave the new Soldiers some Military Operations on Urban Terrain training.

"MOUT training is very relevant to the current war doctrine overseas and a great opportunity to give the privates some exposure to real world missions," said Giese.

This initial weekend was the first of many, as the recruits will be returning

monthly until their Advanced Individual Training commences. The 49th will be their host throughout that transition; helping to pave the way for the Soldiers to move into the National Guard force.

"For the first time, I felt like I was a warrior on a drill weekend and not a civilian," said Pvt. Ian Beers, a member of the 15 RSP Soldiers receiving training at Fort Greely.

## SMDC/ARSTRAT prepares for headquarters' move

By Dottie White  
SMDC/ARSTRAT  
Public Affairs

**REDSTONE ARSENAL, Ala.** — As a result of the recent Base Realignment and Closure, or BRAC, the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command headquarters is relocating here from Arlington, Va.

In preparation for the move, there is a lot of construction taking place on the fifth floor of building 5220, Von Braun

Complex. Office spaces are being built for Protocol, Congressional Affairs, Legal, Chief Scientist, and the deputy to the commander for Research, Development and Acquisition.

"Our plan is for Lt. Gen. Kevin T. Campbell, commanding general, SMDC/ARSTRAT, to be operational here on June 18," said Col. David J. Bender, Deputy Chief of Staff, Engineer.

"The commanding general will move to the deputy for RDA's current office after some

modifications are made to make the area more secure," Bender said.

The relocation of employees from headquarters has generated moves for several organizations and people throughout the command here. Bender said the goal is to keep the moves organized in a way that will keep organizations together now and in the future.

"RDA, Command Analysis, reconsolidated and moved to fourth floor," Bender said. "Prior to this, they were

spread throughout the building."

"People are making the best of the move," said Lisa Gilbert, director of RDA Command Analysis. "The move has been very well organized, and everything has been running very smoothly. One good thing about moving around and trading cubicles is that you get to know new people — which is nice."

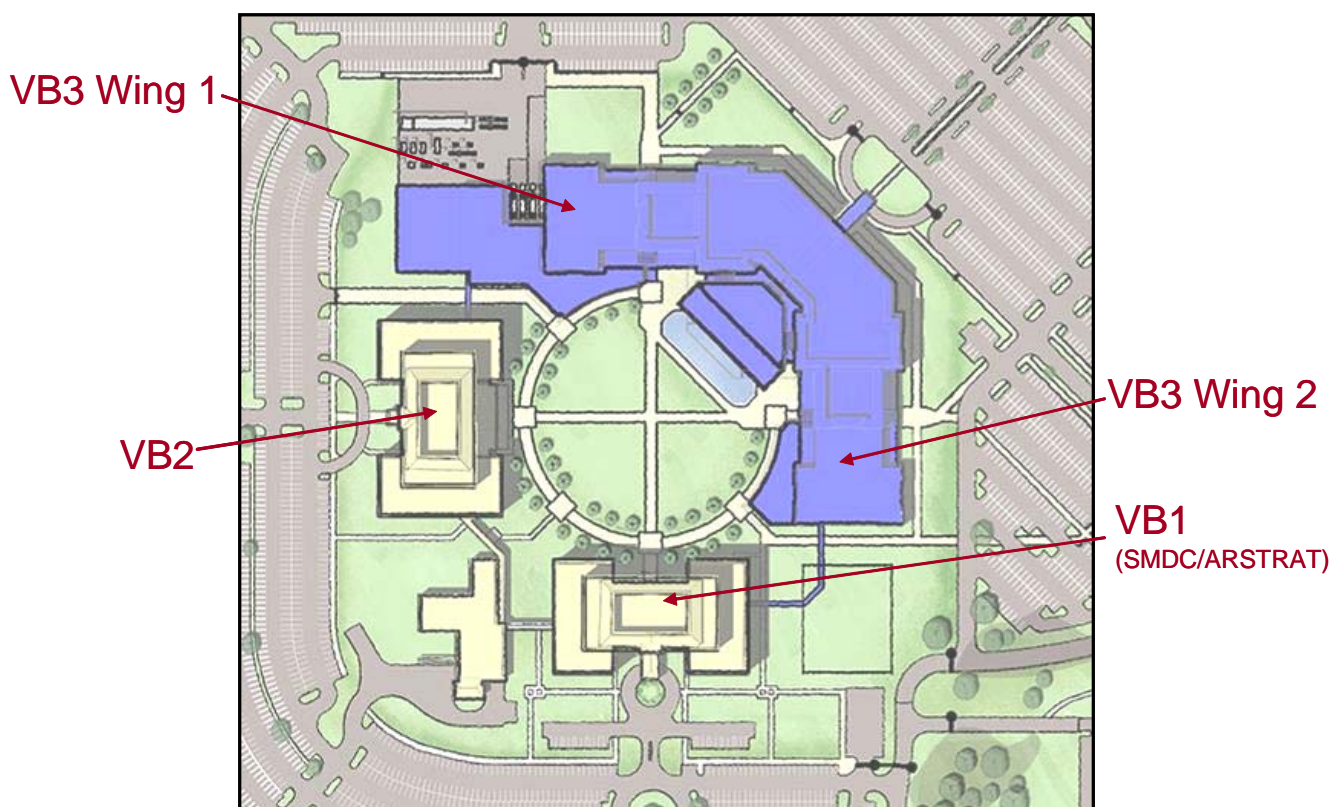
RDA Integrated Capabilities Management also relocated to fourth floor and was given more space to meet mission needs.

Bender said many people are asking, "how are we all going to fit here?" The answer, he said, is due to our current hiring lag. We have enough vacant spaces in the building to accommodate all the employees moving here from headquarters. Von Braun two will also play a role in this.

"We're anxiously awaiting completion of VB2 next door," said Bender. "It's important for people to know, it is not being built for BRAC. It is being built by the Missile Defense Agency. They have agreed to provide us 80 temporary spaces, so we can move our headquarters from Arlington to Redstone Arsenal earlier than the previous scheduled date of 2010.

"Because of the new building and the deal with MDA, we have space to utilize until VB3 is complete, which is using

### Preliminary Von Braun Complex



See **Construction** on page 9



## New employees have relocated to Huntsville due to BRAC

By LuAnne Fantasia  
SMDC/ARSTRAT Public Affairs

**HUNTSVILLE, Ala.** — Major changes are imminent through decisions of the 2005 Base Realignment and Closure Commission, with change already visible at SMDC/ARSTRAT. Some employees have moved out for opportunities elsewhere, while others are moving in.

**Norm Dion** is not a stranger to moving or change. The 26-year Army Chief Warrant Officer Four hung up his uniform in 2002, continued working for SMDC/ARSTRAT in the Arlington, Va., offices as a contractor; converted to civil service in 2004; and now — three years later — was one of the first to raise his hand when the BRAC decisions were announced last year.

The New York native moved here in October 2006. “As moves go, this was a good one,” Dion said. “I had been in Huntsville many times to attend different Army schools here, and felt good about making this move. Huntsville’s housing is affordable, and it will be good to have all of our [team] from Arlington and Colorado Springs together in one place.”

Dion works in the Missile Defense Branch of the Capabilities Development Division — a subset of the Directorate of Combat Development in the Future Warfare Center. He said one lieutenant colonel and two other Army civilian positions in his branch will eventually move to Huntsville.

**Dr. Mark Swinson** moved his family here from Arlington in June 2006.

“I accepted this job in 2005 partly because I knew it was going to move to Huntsville,” the chief scientist said. “I was stationed in Huntsville twice before while on active duty, and my family and I wanted to return.”

Swinson, a 1974 West Point graduate and 26-year Army veteran, retired as a colonel in 2000 while serving at the Defense Advanced Research Projects Agency, or DARPA. Soon selected for Senior Executive Service, Swinson worked in senior management at Sandia National Labs in Albuquerque, then Research Triangle Park in Raleigh-Durham with the Army Research Office before coming to SMDC/ARSTRAT.

“We’re gypsies,” Swinson said, explaining that in his 32 years of marriage to his wife, Priscilla, they have moved 26 times. “My wife had no idea what she was getting into when she married me,” Swinson quipped. “She told our son, Karl, during this move, that she really hates moving! My son told his Mom, ‘... you picked a heck



(l to r) Marco Morals, Norberto Soto-Fuentes, Diane Schumacher, Norm Dion, Dr. Mark Swinson, Ed Kiker and Karen Butler have all relocated with their jobs to Huntsville.

Photo by LuAnne Fantasia

of a time to tell Dad, now!”

He said this is probably their last move. His son transferred schools from North Carolina to the University of Alabama Huntsville, and Swinson said the impact on his job has been seamless.

“No matter what, we knew 2006 was going to be somewhat disruptive,” he added, “but it’s not a big difference for me to work from Huntsville ... and it was easier for us to move last summer during my son’s break in school. General Dodgen was understanding of that and fully supported my timing decision for the move.”

Although she loves her job here, her new mini-ranch, and her family is happy with the relocation, **Karen Butler** faced a Colorado blizzard, being snowbound in an empty house, and treacherous icy interstates to get here.

“I got here Christmas Eve day with three horses, a high school senior and a husband,” Butler said. “We had an incredibly awful time driving here but we’re happy to be here. The command gave me three choices and has been extremely supportive with my decision and this move.”

Butler’s son, Eddie, is already playing soccer at Limestone High School, and her husband, Todd, is a U.S.M.C. Reserve First Sergeant. Her oldest son, Danny, is on a Reserve Officers’ Training Corps, or ROTC, scholarship at Colorado University, Boulder.

Butler manages military officer strength for the command. “I have 12 and a half years in human resources in civil service, and I didn’t want to change career fields. So, I decided to move with my job. We love it here.”

She said although she doesn’t have direct access to Soldiers as she did in Colorado Springs, communication through

e-mail and telephone has made her transition almost transparent.

“The IT team here has been phenomenal,” Butler exclaimed. “I made homemade cookies for them to try to pay them back for all they’ve done.”

Butler encourages others feeling BRAC tapping them on the shoulder to keep an open mind about new opportunities. “The command is changing, and we’re all going to have to be flexible. It’s a great opportunity to move here and the term “Southern hospitality” is not a cliché ... the people here are genuinely nice. They’re not nice because they want something ... they’re just nice.”

**Diane Schumacher** and **Marco Morales** both relocated from the Public Affairs Office in Arlington, Va., in December. Morales’ wife moved back to Huntsville early last year, and Schumacher’s husband and parents will join her here this summer.

Before the town halls and before the official offers, there were the rumors about the command moving, Schumacher said. “I’m thinking ahead about my retirement, so the thing that sealed the deal for me was when members of the [Huntsville and Madison] Chambers of Commerce visited and told us that federal retirement pay is tax-free in Alabama,” she added. “I love Virginia but realized we couldn’t afford to live there on our retirement incomes after taxes.”

That was a year ago. Schumacher received her orders in October, and after a couple of house-hunting trips to Huntsville, she and her husband, Scott, bought a new home here. “This is the first time we’ve ever owned a newly-constructed home, so we’re excited!” she said.

See **Recolate** on page 10

### Construction

continued from page 8

BRAC dollars,” Bender said.

“VB2 is scheduled to be completed in July, however we don’t anticipate we can occupy the building for one or two months after that,” he said. “The extra time is needed to allow for

communications and furniture to be installed.

“By October 2007, we will move 80 SMDC/ARSTRAT employees there,” said Bender. “CAMO [Contracting and Acquisition Management Office] and BMDSM [Ballistic Missile Defense System Manager] are the organizations

that will occupy those 80 spaces.”

He said the concept of VB3 has been approved and the contract should be advertised during the summer. Construction should begin in 2008.

“Upon completion of VB3, SMDC/ARSTRAT will be

allocated 180 permanent spaces in that building,” said Bender. “This will include the 80 borrowed spaces from VB2 and an additional 100 new spaces.”

VB3 is currently scheduled to include an auditorium, a large fitness center and a cafeteria.



Three commanders represent past, present and future at the 100th Missile Defense Brigade Headquarters and Headquarters Battery. A change of command ceremony saw command of the battery pass from Capt. Tim Shaffer, left, to Capt. Marc Reyher, right, with Col. Michael Yowell, brigade commander, standing center, as symbol of the present and continuity.

## Change of command at Ground-based Midcourse Defense HHB

Story and photo by  
Spc. Michael B. Cost  
Public Affairs Specialist

**COLORADO SPRINGS, Colo.** — A new light sheds on the Headquarters and Headquarters Battery of the 100th Missile Defense Brigade (Ground-based Midcourse Defense) with the change of command from Capt. Tim Shaffer to Capt. Marc Reyher Jan. 19 at headquarters here.

The departing commander, Shaffer, graduated from a Missile Defense Operators Course approximately two years ago and is going off to Schriever Air Force Base to test his skills in the field as a missile defense crewmember.

"The Brigade exists because of the system we have in place and the crews that operate it. We as a brigade and as a whole should never forget that," said Shaffer as he departed.

The incoming commander, Reyher, has been with Brigade headquarters for only a matter of weeks — coming back to Colorado Springs from a tour in Alaska to undertake this task.

"Most of my experiences have come from being a Colorado police officer and military police officer. I believe my experiences in the military and as a ten-year police veteran will help guide me as the HHB commander," said Reyher.

## Relocate

continued from page 9

Schumacher has just over 26 years in civil service and began working for the command in Arlington as the commanding general's administrative assistant in March 2002, moving to the Public Affairs Office in January 2005.

"So far, the impact of the move on my job in public affairs hasn't presented any problems for me," she added. After a period of cross-training with Dottie White, the current editor of this command newspaper, Schumacher will take over monthly publication of *The Eagle*.

Morales worked in the Public Affairs Office here from 1997-2004, when he relocated to the Arlington office. He and his wife, Candee, are happy to return to Huntsville.

"I thought I would return to Huntsville sooner than December, so we bought a house and Candee moved back before me. Then, my move was delayed a few months, but it was okay," Morales said.

"I support the command regardless of personal considerations, although my family is important to me. But, Candee and I have learned to make little sacrifices."

What does he see as the impact of the

commanding general and the staff moving to Huntsville? Morales said staff support that involves a quick turnaround for a three-star flag officer is key to the success of the command's mission, regardless of where that support originates.

"In the Army, there is a traditional belief that being "close to the flag pole" means working under more stressful conditions and longer hours," Morales explained. "But, if you know your job and do it right the first time, this alleviates any perceived stress that may exist."

Morales said his experience has been to make the command's mission, vision, and goals, and the general's priorities *his* priorities. "Situational awareness ... stay informed about the type and level of support required to accomplish the mission. That gives you the advantage. Then you can anticipate how to support the leadership."

**Ed Kiker** is general engineer in the Chief Scientist's Office who moved to Huntsville from Colorado Springs in September. Three more positions for the team will relocate here over the next year.

Although he was born in London, England, to Navy parents, the family called Cordele, Ga., home, "...watermelon capital of the world...because they say so!" Kiker said.

"I've lived all over the world and I loved Colorado Springs, but I'm happy to come back to the food and the accent I'm used to. The people, the weather, the vegetation ... it's all comfortable to me," he reflected.

Kiker has worked on the Space scene since the '60s. He came to the command in Colorado Springs in 2000, "hired to look for anything we do that could be improved," he said. This has included future initiatives such as the Army Performance Improvement Criteria and the more current Lean Six Sigma, various Army space master plans and vision documents, and technical aspects of developing space technologies.

This area lends itself to many of Kiker's personal interests. "I'd like to buy some property with a walk-in cave on it; a lot of rocks and forest, somewhat secluded. It doesn't really have to have a house on it," Kiker added. "I can fix that." He teaches evening adult education classes in making Indian artifacts; he's an ironsmith at the Burritt Museum on Monte Sano Mountain; and he is active with the Huntsville Gem & Mineral Society as a geologist, mineralogist, paleontologist, and cutting and polishing gems.



Courtesy photo

## Open 'Gates'

U.S. Secretary of Defense, Robert Gates (center), met with Soldiers during a recent visit to Bahrain. Maj. James T. Bushong (third from left) is the officer in charge for U.S. Army Space and Missile Defense Command/U.S. Army Forces Strategic Command's Commercial Exploitation Team that has been deployed to Bahrain since March 2006.

## Civilian News

### SMDC/ARSTRAT non-bargaining unit employees to transition to NSPS in March

The U.S. Army Space and Missile Defense Command/Army Forces Strategic Command is planning to transition all non-bargaining unit employees to the National Security Personnel System (NSPS) March 18. Approximately 325 employees command-wide will transition. Leadership has stressed the importance of this transition and the requirement for 100 percent completion of both the SMDC/ARSTRAT Web-based NSPS 101 and the Department of Defense mandated NSPS courses for all non-bargaining unit employees. Approximately 99% of this training has been accomplished and the T3's (Train the Trainer) are moving quickly to complete the rest. "There are seven SMDC/ARSTRAT T3 NSPS trainers, and they've done an exceptional job," said Bob Goodman, SMDC/ARSTRAT NSPS transition manager. "The T3's have had to be everywhere both teaching and traveling to reach out to our command's many geographic locations." In addition to the DoD mandated NSPS training, the command has arranged for supplemental training in writing SMART (specific, measurable, aligned, realistic, relevant, timed) objectives. This training has recently begun and will continue up until the conversion date. All non-bargaining unit employees are required to have their SMART objectives completed prior to the conversion on March 18. Presently, there is an NSPS Web site on the CommandNet for information and questions. "If employees will post their questions on our Web site, we will quickly provide them an answer" said Joyce Lenoir, SMDC/ARSTRAT G-1 NSPS lead. In an effort to further support the command's transitioning employees, there will be a temporary NSPS conversion help desk available in multiple geographic locations the week prior to conversion. Employees are encouraged to visit the conversion help desk to obtain assistance for all of their NSPS needs. Details about the NSPS conversion help desk will be provided shortly. Additional information concerning NSPS can be obtained from Bob Goodman, SMDC/ARSTRAT transition manager, or Joyce Lenoir, SMDC/ARSTRAT G-1.

### New Civilian Education System kicks off

Transformation of the Army begins with educating its leaders. As evidenced in the early part of the 21st century, the roles and responsibilities of Army Civilian Corps are changing. Civilians are taking on positions of increasingly greater responsibility, accountability and authority. The new Civilian Education System (CES) plays a critical role in developing these leaders. CES is a new progressive and sequential Civilian Leader Development program that provides enhanced leader development and education opportunities for Army civilians throughout their careers. For more information about CES and to register for courses, visit the Army Management Staff College home page at <http://www.amsc.belvoir.army.mil>, and click on the "Civilian Education System" tab at the top.

### Center of Military History announces Special Topics Writing Competition

The Center of Military History is pleased to announce its Special Topics Writing Competition, now named for General James Lawton Collins Jr., a visionary Army leader, educator, and historian. The 2007 competition is now open. The goal of this contest is to obtain firsthand accounts from junior officers describing how their unit responded when facing a particular challenge in the current war. The Center of Military History wants to capture the small-unit-level view of this conflict for inclusion in future publications. CMH will announce the competition results in June 2007. First place winners will receive \$500, a certificate of recognition signed by the Army Chief of Staff, and a publication by the CMH. Second place winners will receive \$250, a certificate of recognition signed by the Army Chief of Staff, and a publication by the CMH. Submissions are due NLT April to Jon Hoffman at the Center of Military History. He is available to answer any questions. He can be reached by telephone at (202) 685-2360 or DSN 325-2360; or via email at [hoffmanjt@hqda.army.mil](mailto:hoffmanjt@hqda.army.mil). Information is also available at Web site <http://www.army.mil/cmh-pg/>.

## Military News

### 2007 military handbooks available

The *United States Military Handbook* is designed to help all active duty U.S. Military personnel by giving them the most accurate and complete information available anywhere on pay, allowances, taxes, health care and TRICARE benefits, Veterans and Social Security Benefits, travel, transportation, SBP, retirement, Space-A travel, installation listings, statistical data, and much, much more. The *United States Military Retired Handbook* is designed to help all U.S. Military personnel who have retired — or who are planning to retire. This unique guide covers everything from the nuts and bolts of computing your retirement pay to the detailed explanations of retired military health care, TRICARE, social security, VA, SBP, taxes, insurance, travel, survivor benefits and much, much more. Visit Web site: [www.militaryhandbooks.com](http://www.militaryhandbooks.com)

### TRICARE benefits explained

Do you understand your TRICARE benefits? Do you know if you are enrolled in the TRICARE coverage plan that best suits your family's needs? Are you completely confused by all the TRICARE coverage options, co-pays, deductibles, and acronyms? Clarify many of your questions and concerns. You owe it to yourself and your family to find out as much as you can about TRICARE before making any decisions. Check out Web site: [www.military.com](http://www.military.com). Once there, look at the top of the screen's tool bar for "Benefits" and click on that. This will bring up another screen; to the left look for TRICARE, and click on it. At this site you will find subjects and answers to help in your decision making.

### Veterans Upward Bound higher education

Veterans Upward Bound is a FREE U.S. Department of Education program designed to help you refresh your academic skills and give you the confidence you need to successfully complete your choice of college degrees. VUB program services include: basic skills development to help Veterans successfully complete a high school equivalency program and gain admission to college education programs, short-term remedial or refresher classes for high school graduates who have put off pursuing a college education; assistance with applications to the college or university of choice; assistance with applying for financial aid; personalized counseling; academic advice and assistance; career counseling; assistance in getting Veteran services from other available resources; exposure to cultural events, academic programs, and other educational activities not usually available to disadvantaged people. The VUB program can help you improve your skills in math, foreign language, reading, composition, laboratory science, literature, computer basics and other subjects you may need for success in education beyond high school. Tutorial and study skills assistance is also available. Visit Web site: [www.veteransupwardbound.org](http://www.veteransupwardbound.org).

### Spouse and dependents education

The Army offers education programs for Army spouses and family members. SOCAD is the Servicemembers Opportunity Colleges (SOC) degree program for the Army. SOCAD consists of colleges that offer associate and bachelor's degree programs on or accessible to Army installations worldwide. SOCAD colleges form networks in which each college accepts credits from all the others. SOCAD guarantees that you and your adult family members can continue toward completion of your degrees even though the Army may transfer you several times. There are also degrees available by distance learning that require no classroom residency. Web site: [www.soc.aascu.org](http://www.soc.aascu.org)

### Disney World in Orlando offers discount

This might be old news, but it's always worth repeating: active duty military personnel presenting proper military ID (includes active U.S. Coast Guard and activated members of the National Guard or Reservists) are eligible to receive Disney Ticket discounts. Military personnel can also purchase Disney tickets for up to five members of their family. Guests in the military can only purchase these tickets at "Shades of Green." Military discounted passes can be picked up at the Made in the Shade store located at Shades of Green. Very important to remember: all ticket sales are final, no refunds or exchanges. Prices and entitlements are subject to change without prior notice. Visit Disney's Web site: [www.wdwinfo.com/discounts/discounts-military.htm](http://www.wdwinfo.com/discounts/discounts-military.htm).

# Warrior Citizens – it's not your 'normal' job

By Diane Schumacher  
SMDC/ARSTRAT Public Affairs

"Warrior citizen." This is a motto describing civilians who sign the dotted line for United States military duties that can, and do, take them away from their jobs and families although not usually for a year or longer.

"Army Reserves, it's not your everyday job," TV commercials advertise. No it isn't a "regular" job. It used to be one weekend a month and two weeks in the summer away from the civilian profession and the family to receive some type of military training or drilling, or perhaps to fill in for an active duty regular Army Soldier on extended absence. Some called it a vacation. It was something simple like that.

But it isn't like that anymore — not since terrorists killed nearly 3,000 people on U.S. soil that sunny, crisp day Sept. 11, 2001.

More than 162,000 Army Reserve Soldiers have been called to active duty in Iraq, Afghanistan and other countries since 9-11 and tens of thousands have deployed more than once to either Iraq or Afghanistan.

The U.S. Army Space and Missile Defense Command/Army Forces Strategic Command has many warrior citizens in its ranks. There are civilians (federal general schedule and contractors) in this command who have been called to active reserve duty. Some stayed in the command but now wear an Army uniform. A few SMDC/ARSTRAT civilians called to active reserve duty have mobilized to units outside of this command. And of course, we have reservists coming in from outside the command to help accomplish our missions.

According to Army Maj. Vonna R. Baxter, the senior reserve advisor for SMDC/ARSTRAT, in information released Jan. 12, there are 36 reservists within SMDC/ARSTRAT, 25 within the 1st Space Brigade and 26 in the Army Space Support Team.

Since the Bush administration declared the global war on terrorism (GWOT), the men and women who signed up as Army reservists before and after that horrible day in American history, 9-11, have since ended the "weekend warrior" scenario. Now they are called upon to fill an active duty Army role up to one year, and for some, it's been as long as four years on active duty as an Army reservist — certainly a distant cry from that one weekend a month and two weeks in the summer.

In the December 2006, issue of the Reserve Officers Association's magazine, "The Officer," Lt. Gen. Jack C. Stultz, chief, Army Reserve and commanding general, U.S. Army Reserve Command made the following statement: "Today's Army Reserve is no longer a strategic reserve."

Besides being "an operational force and an integral part of the world's greatest Army," as Stultz said, there are, perhaps, three other issues of concern to those making the decision to serve in the Reserve component (RC).

One: If I'm already on active duty in the Army and decide I want to go into the Reserves, will the time I spent deployed count for service when I enroll in the Reserves? Two: Will I be deployed to an area of conflict and how long will I be deployed? Three: Do regular Army active duty personnel understand that I am of value to the unit?

## Former active duty deployment:

One thing active component (AC) Soldiers should realize if they plan to transfer from the AC to the RC, is that time spent deployed while on active duty doesn't count once that Servicemember enrolls into the Reserves, said Maj. Alexis M. Wells, troop program unit (TPU) detachment commander, which means their mobilization clock will restart. What a former AC Soldier can count on is that when he or she enrolls in the Reserves, there will be at least 12-18 months "dwell time" from their last deployment. Dwell time refers to being home or in a "dwelling." However, unlike AC Soldiers who rotate between deployments much more frequently, the Reserves will typically get four to five years between deployments. It will be this way as long as the nation remains at war. Here is the explanation:

## Length of reservist deployments:

On Jan. 11 this year, Robert Gates, the new defense secretary announced at a news conference that "from this point forward," the amount of time that Reserve units spend mobilized for federal duty will be limited to 12 months. Up until the 11th, reservists' mobilizations had ranged from 16 to 24 months, although the time spent in Iraq had been mostly limited to 12 months.

Gates also said there will be about five years between mobilizations for reservists but because of the demands of war, a number of units will be called up more frequently. He was not specific as to how many units.

## Perceptions on the value of reservists on active duty:

One warrior citizen in the command headquarters is Richard "Cash" Snively, a federal general schedule (GS) civilian in the command's G-2 (intelligence) office.

The announcement made by Gates that reservists will be mobilized no longer than 12 months comes too late for Snively. He left the G-2 in the spring of 2002 and returned this past October, spending about four and a half years deployed as an Army major at four different jobs in Washington, D.C.

He feels reservists are "the quiet and forgotten" military members who perform duties just as important as those on active duty. Someone might ask about Person X, a reservist, Snively said, and the answer might be "Oh yeah, I remember him, sort of, he used to work here," continued Snively; but the reality is that Person X is a Reserve Soldier called on active duty and has mobilized out of the command, he added.

The time that Person X puts into his/her active duty time is dedicated time, just like that of an active duty Servicemember. Person X, the reservist, is an integral part of SMDC/ARSTRAT, whether he/she is serving in the usual civilian capacity or as a reservist. This is what Snively wants us to know and to remember.

In the beginning of the GWOT, so many active duty Soldiers were sent to Iraq that an unusual number of the reservists were called in to replace the departing active

duty (regular Army) Servicemembers, Snively said. The Reserve has supplemented the active component and will continue to do so but for shorter periods, Gates has said.

"It's the path to the future when it comes to theater level support by organizations like SMDC/ARSTRAT," said Lt. Col. Patrick J. Lozier, executive officer in the 1st Space Brigade, referring to reservists supporting service component commands in the Army.

Snively said he helped stand up the intelligence support for the Army Operations Center in the Pentagon at the fullest level possible of workers. In the beginning of that stand-up, there was a 40-50 percent active duty and reserve all-rank mix, he said. During his tenure at the Defense Intelligence Agency, of the 400 people working at the joint intelligence task force-combating terrorism (JITF-CT), more than 130 reservists helped cover the mission on terrorism issues, Snively said.

Lozier is a 26-year long Army reservist with 20 of those years spent on active duty. He is currently an Active Guard Reserve officer, with more than ten years assigned to active duty units and would like people to understand there is virtually no difference between a Servicemember who is a reservist called to active duty and a regular Army active duty Soldier.

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**'... reservists bring valuable civilian skills when called to duty, and those civilian skills lend to quick learning and adaptability as well as a dedication to service and country.'**

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— Lt. Col. Patrick J. Lozier

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Some people may look at reservists as no more than weekend warriors taking over a vacated spot in an Army unit but that isn't so, Lozier said. "We are one family, one team, one fight. When someone wears a 1st Space Brigade patch, there's no way to know if that Soldier is a reservist or active duty, and that's the way it's supposed to be." Duty performance remains consistent whether the job is performed by a reservist or an active duty Soldier.

"Whether I'm working as a GS employee or as an Army reservist, I'm a military intelligence officer," Snively said, "That's what I do." During his active duty reserve time, he spent three and a half years specializing in war on terrorism duties and one year working in the Pentagon's Army operations center, all centered in the intelligence field. Snively brought his civilian experience and outlooks to his active duty time, he said.

Many active duty Servicemembers are seeing, learning and reevaluating their perception of reservists. They are discovering that reservists bring valuable civilian skills when called to duty, and those civilian skills lend to quick learning and adaptability as well as a dedication to service and country, said Lozier.



Photo by Sgt. John Ames

Spc. John Bittner instructs Spc. Jason Stevens on proper shooting techniques to prepare for an M16 range. Both Soldiers are with Charlie Company, 53rd Signal Battalion, located in Landstuhl, Germany.

## Charlie Company takes aim

By Pfc. Daniel McCafferty  
Unit reporter

**LANDSTUHL, Germany** — Chances are Soldiers from Charlie Company, 53rd Signal Battalion, may not end up on the front line, but if they are ever called up for such duty, they're ready! With a dismal day at hand which included overcast skies and a slight drizzle, the Charlie Company Control Warriors recently took to the range to qualify with their M16A2 rifles an elemental task of being a Soldier.

Despite the poor weather conditions, Charlie Company Soldiers performed well on the range, which consisted of two separate firing sections.

The first range was used for Soldiers to zero their weapons. The zeroing process is vital if any Soldier hopes to perform and qualify at the range. If a Soldier were to zero improperly he or she would more than likely be unable to qualify at all. The second section of the range made use of known distance pop-up firing targets which simulated enemy targets.

Soldiers had to fire from three separate positions to qualify. First the firers were given 20 rounds at 300 meters prone supported and were told to lock and load. After all the Soldiers expended their 20 magazines, the range cadre then ensured that all Soldiers got up to the next firing position.

The next firing position came at the 200-meter point on the range. Once all participants reached the 200-meter point and placed their weapons on the ground, they assumed a good prone unsupported firing position. All Soldiers were then given a 10-round magazine and were instructed to engage. The last firing position came at the 100-meter point on the range.

For this set of targets,

Soldiers were given a 10-round magazine just like they were at the 200-meter target then told to assume a good prone unsupported firing position and given the same instructions. They were once again told to lock and load their 10-round magazine and to fire when ready. The final event signaled the last part of the qualification which concluded the range for that Soldier.

After the entire process was complete the Soldiers were then informed if they qualified or not (to qualify, a soldier must hit 26 out of 40 targets). Although a score of 26 is the minimum, the Soldiers of Charlie Company never strove for the bare minimum. Sure enough, many of the Soldiers were afforded the opportunity to increase their basic rifle marksmanship score on the range after qualifying; once again demonstrating Charlie Company's commitment to excellence.

There were many positive aspects to come out of the range, yet first and foremost no serious safety violations were experienced thus ensuring the safety of all who participated in the range. No injuries were reported aside from a bee sting one Soldier received while guarding the main gate.

The range was a chance for the Soldiers of Charlie Company to show off their skills with a rifle but it also gave the Soldiers the opportunity to bond outside the confines of the office. Given their mission, there are a number of Soldiers who do not get to interact much with the noncommissioned officers of the support platoon, yet this training provided a good opportunity to build rapport.

Charlie Company as a whole came together as a successful team to accomplish one goal, to provide real world training for its Soldiers ... CONTROL WARRIORS!

## 2nd Annual Joint Integrated Air and Missile Defense Summit set for March 5-8

The Second Annual Joint Integrated Air & Missile Defense (JIAMD) Summit will be conducted March 5-8 in Huntsville, Ala. The summit theme is "Addressing the Issues — Uniting the Team."

The event is classified and participants can request an invitation by going online to [www.JIAMDsummit.org](http://www.JIAMDsummit.org) before the Feb. 23 cutoff date. The summit will establish ground for future forums to improve communication between government and industry and refine a JIAMD Family of Systems.

A pre-summit luncheon is scheduled for Feb. 20 and will feature guest speaker Maj. Gen. Larry D. New, Joint Chiefs of Staff J-8, deputy director, Force Protection Force Structure, Resources, and Assessment Directorate.

Gen. James Cartwright, commander, U.S. Strategic Command, is scheduled as the keynote speaker March 5.

More information on the summit is available at the Web site given above.



Photo by Jack W. Carlson III

## Alaska Navy commander visits Fort Greely troops

Rear Admiral Arthur Brooks, commander, U.S. Naval Forces Alaska, is briefed by Sgt. Michael Piccirillo, military police officer, 49th Missile Defense Battalion (Ground-based Midcourse Defense), on the Electronic Security System during his visit to the Missile Defense Complex at Fort Greely, Alaska, Jan. 17.

## Freedom Team Salute program continues

Freedom Team Salute is a unique Army program that began in May 2005. It provides a way for Soldiers to recognize their team of supporters back home, including spouses, parents and employers. In addition, as a special thanks to Army Veterans for their service and sacrifice, the Army will send a Freedom Team Salute Commendation package to U.S. Army veterans who register with the program. A Soldier's success is due in large part to the support of family and employers. FTS is a means to thank them for that support.

Soldiers should visit [www.freedomteamsalute.army.mil](http://www.freedomteamsalute.army.mil) to nominate a parent, spouse or employer for a commendation package. Veterans can register at the same site for a commendation package. The general public and civilians as well as all Servicemembers, can nominate an unlimited number of U.S. Army Veterans. Each commendation package contains:

- Official U.S. Army lapel pin (mounted on a card)
- Official U.S. Army decal
- Certificate of Appreciation signed by both the Chief of Staff and the Secretary of the Army
- Letter of Thanks signed by both the Chief of Staff and the Secretary of the Army.



# Where we began - the NIKE-ZEUS Program

By Mark Hubbs  
SMDC/ARSTRAT Historical Office

**JAN. 16, 1958** — Secretary of Defense Neil H. McElroy assigns the primary mission of ballistic missile defense to the U.S. Army.

In the 1950s, both the Army and the Air Force were developing ballistic missiles and exploring anti-missile technologies, resulting in duplication of effort and a rivalry between the services. The sense of urgency for this technology was heightened by the Soviet launch of an Intercontinental Ballistic Missile (ICBM). In August 1957, anti-missile system development received the highest national priority. Toward the end of the decade, Secretary of Defense Neil McElroy officially defined the missile defense roles and missions for the various services. Based on early successes with the NIKE-ZEUS system, the Army was given responsibility for the ballistic missile defense mission, to include interceptor missiles, launch sites, tracking radars and computer equipment. The Air Force would develop early warning radars and communication links.

The lion's share of this mission would fall on an obscure project office at Redstone Arsenal, Ala. Less than a year old, the Redstone Anti-Missile Missile Systems Office (RAMMSO) was established on Oct. 3, 1957, with the mission to develop the NIKE-ZEUS anti-missile system. Through the next 50 years, RAMMSO and its mission would evolve to become the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command in 2003.

NIKE-ZEUS built on previous Army interceptor and radar technology from the NIKE-AJAX and NIKE-HERCULES programs. The earlier missiles were designed to defend against high-altitude nuclear armed strategic bombers. Between 1954 and 1958 two hundred NIKE-AJAX launch facilities were deployed around key urban, military and industrial areas of the United States. The NIKE-AJAX batteries were later upgraded to nuclear-tipped HERCULES missiles in the early 1960s.

## An Aggressive Test Program

As NIKE-AJAX and HERCULES continued to defend against Soviet bombers, the RAMMSO and its successor organization the U.S. Army Rocket and Guided Missile Agency (ARGMA) began testing the NIKE-ZEUS system in 1959. Initial booster and flight testing occurred at White Sands Missile Range, N.M., and Point Mugu, Calif. The first integrated system test resulted in the successful intercept of a NIKE-HERCULES missile over White Sands on Dec. 14, 1961. The ZEUS interceptor passed within 100 feet of the target missile, well within the distance defined for a successful nuclear intercept.

When intercept tests against long range ballistic missiles were required, test operations were established at a remote, obscure naval base in the central Pacific. Kwajalein Atoll

presented the most logical solution for testing with its existing logistical infrastructure and distance from target launch locations at Vandenberg Air Force Base, Calif. Integrated system testing began at Kwajalein as interceptor testing was still being conducted at White Sands and Point Mugu. In fact on Dec. 14, 1961, the NIKE-ZEUS program accomplished an amazing feat, conducting three separate tests, at these three different installations almost simultaneously.

The first attempted NIKE-ZEUS intercept of an ICBM in June 1962 failed due to a radar malfunction. The second attempt in July was more successful. The third test on Dec. 12 was a complete success. An Atlas D nose cone traveling at 16,000 miles per hour was intercepted over the Pacific Ocean. A wire service reporter declared the test a "majestic bull's-eye...a bullet hitting a bullet". Ultimately, the NIKE-ZEUS test program conducted 79 developmental and 68 system tests with a total of 147 launches over a seven year period.

## Project MUDFLAP

As ARGMA was diligently designing and testing the NIKE-ZEUS system, a new requirement for the program was announced by Secretary of Defense Robert McNamara in April 1962. The NIKE-ZEUS project was to provide the capability to defeat an orbiting Soviet satellite which, it was believed at the time, would have the ability to drop nuclear bombs to the surface of the earth. Known as Project MUDFLAP, the project was given one year to demonstrate this capability. Testing began at White Sands in December 1962 with a modified ZEUS missile and ultimately reached altitudes of over 150 nautical miles. In March 1963, testing moved to Kwajalein where a ZEUS missile intercepted an AGENA D satellite in May 1963. From that moment forward the MUDFLAP missiles and personnel at Kwajalein remained in a state of readiness to launch a ZEUS in an anti-satellite mode. Training and test launches continued in 1964 until the anti-satellite mission was terminated.

## The NIKE-ZEUS Legacy

Although the NIKE-ZEUS system achieved success in its ability to intercept warheads and satellites, those tests also revealed shortcomings in its mechanically steered radars. Opponents argued that a saturation attack that would overwhelm the radars which were only able to focus on one target or interceptor at a time. As a result, officials decided in January 1963 not to deploy the NIKE-ZEUS. Instead, the program, now known as NIKE-X, would continue in a research and development mode, focusing on the evolving threats of the 1970s. Nevertheless, the lessons learned from the successes and failures of NIKE-ZEUS system tests were vitally important in the development of follow-on systems including SAFEGUARD, the free-world's first deployed and operational ABM system.



Col. Ivey Drewry and C.A. Warren of Bell Labs inspect the new NIKE Office sign at bldg. 4505, Redstone Arsenal, Ala.



An early "winged" NIKE-ZEUS launches at White Sands Missile Range.



Installing the Radome on the Target Track Radar

# What was NIKE-ZEUS?

By Sharon Watkins  
 SMDC/ARSTRAT Historical Office

Developed in the late 1950s and early 1960s, the NIKE-ZEUS system was composed of the ZEUS missile, four separate radars — the ZEUS Acquisition Radar (ZAR), the Target Track Radar (TTR), the Discrimination Radar (DR), and the Missile Track Radar (MTR) — target intercept computers, and the defense and battery control centers.

The NIKE-ZEUS Defense Center, composed of a ZAR and signal processing equipment, could supply data to up to five batteries in defense of a specific area. A battery in turn was to be composed of at least one DR, three TTRs, six MTRs, two target intercept computers and 24 missiles and could have up to 31 radars, six computers and 72 interceptors. To realize the scope of a potential deployment, a January 1961 production plan called for 29 defense centers, 70 batteries and supporting equipment, and 3,160 missiles to be constructed over an eight-year period.

An entire NIKE-ZEUS system was installed at Kwajalein Missile Range in 1961. This battery was constructed on Kwajalein itself. It was composed of a ZAR, two TTRs, a DR, three MTRs; battery control equipment, a target interceptor computer, and four ZEUS launch cells at Mount Olympus, a specially constructed 65-foot hill which became the highest point in the Marshall Islands.

The ZAR, the size of a baseball diamond surrounded by a 60-foot-high radio frequency shielding fence, would provide multi-channel data on ballistic targets or decoy formations to the appropriate battery. Described as “a highly-accurate, three-dimensional radar with a substantial range against small targets, the ZAR was equipped with separate transmitting and receiving systems and could scan 100 million cubic miles of space per second.

When a cloud of threatening objects was assigned to a battery, the Discrimination Radar would scan the area. A DR, a 40,000-square foot structure equipped with a 38-foot radome, would provide data on all

of the objects in the cloud, up to a diameter of 22 nautical miles, to the data processing equipment to identify the target. Once the target was “selected for engagement” the information was transferred to a Target Track Radar. Operating in conjunction with a Target Intercept Computer, the TTR provided continuous point data on very small high-speed targets in the terminal phase.

The MTR worked in conjunction with the interceptor itself. It transmitted steering, arm, burst and other orders from the intercept computer to the ZEUS missile, to a range of 72 nautical miles. Using a specific combination of carrier frequency and pulse code for each missile, the data was transmitted to the four antennas in the guidance unit of the missile. The ZEUS, itself, was designed as a three stage missile equipped with a nuclear warhead. Larger than the earlier NIKE missiles, the ZEUS measured over 50 feet in length and 36 inches in diameter. The ZEUS had a gross weight of 24,200 pounds, with a payload weight of 468 pounds.



...os courtesy of U.S. Army  
 -ZEUS Project



...ge, N.M.



A group of West Point Cadets pose with a NIKE-ZEUS missile at White Sands Missile Range, N.M.



The Missile Track Radar at White Sands Missile Range, N.M.



The Zeus Acquisition Radar and smaller Target Tract Radars on Kwajalein Island, Republic of the Marshall Islands

## First stop on the way home

By Sgt. Christopher Miller

### Commentary

**LANDSTUHL, Germany** — For the countless Soldiers stationed here, there are many opportunities to see the surrounding countryside, visit many historic castles and enjoy a great night life. Unfortunately many Soldiers who are stationed here with Charlie Company, 53rd Signal Battalion, are unaware of what happens on a day-to-day basis just a mile up the road.

The town of Landstuhl is home to Landstuhl Regional Medical Center (LRMC); the prime focal point for all Soldiers, Airmen, Marines and Sailors who are injured downrange to come to before heading home.

All Servicemembers who are injured must first endure the long and painful journey from the point where they were injured on the battlefield or at their station to their stop point here in Germany. When they finally make it to Landstuhl, they are met by a collection of Servicemembers and civilians who work in the hospital.

On an almost daily basis, multiple buses come from nearby Ramstein Air Base to deliver the injured Soldiers to the front doors of the emergency room. Volunteers and workers in the Landstuhl Regional Medical Center meet these buses and start the process of getting these wounded warriors to the medical treatment that they badly need.

But it is not all doom and gloom, despite the fact that these Servicemembers get taken off the bus on litters, not all of them are in dire need of surgery or emergency medical care. A large number of the passengers are lucky enough to leave the combat zone with concussions or broken bones.

I was among several Soldiers from Charlie Company who were fortunate to have the opportunity to volunteer with a manpower section and see exactly what happens throughout the process of moving Soldiers off the bus and into the hospital. I arrived at Landstuhl's emergency room around 12 p.m. and waited for the remainder of the volunteers to arrive.

I was met by Pfc. Christopher Kaufmann, a new Soldier to Charlie Company, and our executive officer, 1st Lt. Carlos. No

sooner had we put on our latex gloves than a bus arrived. The volunteer team jumped into action and immediately had the back of the bus open and moved the injured out. The team worked in unison to lift each litter off the back of the bus and onto a gurney.

Within minutes, the teams called the names of the wounded warriors to meet their designated representatives.

I ran into a staff sergeant who I had worked with in my former unit who now served as a representative for the 82nd Airborne Division's Soldiers who are injured downrange. Fortunately for them, no Soldiers from America's guard of honor were among the injured that day, and thankfully most of the wounded present were not badly injured and could make it off the gurneys once they made it inside.

I was able to accompany a wounded Army warrant officer into the emergency room. She was a bit disoriented from pain medication that she had been given. Not surprisingly, it was kind of hard to stop her when she decided to stand up and managed to hit her head on the phone booth next to her.

By the time I was able to move the groggy warrant onto the nursing unit, most of the volunteers had removed the injured from the buses and into the hospital.

Once the unloading of injured personnel was complete, the next step was to get everything back to normal. 1st Lt. Santana, Pfc. Kaufmann and I helped to put away the gurneys used to move the wounded to and from the hospital.

After all was said and done, we headed home from an eye opening experience that was well worth our time.

Because of this experience, we have gained a better appreciation for the duties we perform to support the warfighters and understand more why our job is vitally important.

All Soldiers should be afforded the chance to help their brothers in arms in new ways. This opportunity would help to shed more light on the sacrifices and hard work that those members of the military deployed downrange make on a daily basis.

## 'From Slavery to Freedom: The Story of Africans in the Americas'

By Mary Peoples  
Equal Employment Manager

### Commentary

The theme for this year's Black (African American) History month "From Slavery to Freedom: The Story of Africans in the Americas" has a personal meaning to me because it reminds me of the life and time of my great-grandfather, Stanhope Dixon. The theme is dedicated to the struggles of people of African descent to achieve freedom and equality in the age of emancipation.

I am sharing my personal account of how Stanhope Dixon, my maternal great-grandfather, went from slavery to freedom and his story of survival, leaving a legacy for his family.

My great-grandfather, Stanhope Dixon, was born as a slave in 1846 in Madison County. He was 17 years old when the emancipation proclamation was signed in 1863.

There is no record of him knowing who his mother or father was, other than his recollection that his mother was sold and that he had a brother named Tommie who was also sold to a slave master with the last name of Love.

Stanhope Dixon was married to Eliza Jane Lacy who was born in 1859 and was 4 years old when slavery ended. She had one brother who she knew of named Thomas Lacy.

Thomas became the father of three children who were born and reared in Madison County.

Stanhope and Eliza were the parents of seven children, 4 boys (Walter, Wallace, Calvin, and William) and 3 girls (Mary, Lucinda and Eliza).

Eliza Dixon Toney Turner, my maternal grandmother, married and had eight children by two husbands. She was widowed at a very early age when her young husband, Archie Toney died suddenly, leaving her with Archie Jr., Emma, and Lucinda.

I am able to share this story based on the stories told to me by my mother Emma Toney Draper, who is now 87, and her sister Lucinda Toney Robinson, who is 84. They were raised by Grandpa Stanhope and Grandma Eliza.

When their mother Eliza married, she moved from her parents home to live with her husband Archie. Eliza had to move back in with her parents due to the sudden death of her husband in 1922, bringing with her three children, Archie Jr., Emma, and Lucinda.

My grandmother Eliza subsequently married the second time and went to live with her new husband; however, her



Mary Peoples

three oldest children remained in the care of Grandpa Stanhope and their grandmother. They lived with Grandpa Stanhope and their grandmother for about 15 years, helping to take care of the farm.

When both grand-parents became too old and sickly to run the farm, all three children quit school to take care of them and farmed the land to make a living.

Not very much is known of Grandpa Stanhope's early formative years that he shared with Mama and Aunt Lucinda that they recall.

One story they do recall that he shared with them is as slaves. They had to turn a washpot down in the floor of their cabin. They believed this would capture the sounds, so the slave master would not hear them when they sang or prayed or talked while trying to educate them-selves.

He had no formal schooling at all, but could read. He also shared with them recollection of not having shoes to wear in the fields many times and when it was cold, he would wrap his feet with burlap to try to keep them warm.

He became a preacher and in latter years, ended up owning 160 acres of land in Madison County (located on land that is now a part of Redstone Arsenal). At some point in time, the Tennessee Valley Authority (TVA) bought some of his land, leaving him with 60 acres of the property.

The year 1937 was not a good year for the family with three deaths that would affect the lives of Emma and Lucinda. Their brother, Archie, 18, died in January, Grandma Dixon died, 78, in February and Grandpa Stanhope died in April of 1937 at the age of 91.

In his will, Stanhope left his 60 acres of property to two of his children (Eliza and Wallace) who lived nearby and helped him and also left property to

See *History* on page 17



# Exercise UFL offers historic military lessons too

By Ed White  
SMDC/ARSTRAT  
Public Affairs

**NEAR OSAN, Korea** — Exercise Ulchi Focus Lens is more than an exercise of military strategy. It is a reminder that the Korean Peninsula is still an armed camp and that more than 50 years ago American Soldiers fought, bled and died to ensure the freedoms of the South Korean people.

Several members of the 1st Space Brigade were able to see some of the battle history of the peninsula during their time in Korea. They arranged a staff ride and went to the location of the very first battle of the Korean War. The participants learned some of the history that precipitated the beginning of hostilities and were able to see where the historic and fateful battle took place.

As the Japanese surrendered at the end of World War II, Korea was divided between the Soviet Union and the United States. Unfortunately it was done without consulting the Korean people and it forced a permanent ideological conflict between the Northern and the Southern populations.

The Korean War began on June 25, 1950, and ended with an armistice on July 27, 1953, (though no permanent peace treaty has ever been signed). It started as a civil war between North Korea and South Korea, both existing as provisional governments competing for control after the division of Korea, but escalated into a multinational conflict once North Korea launched a massive invasion of the South.

The first battle between the United States and North Korean forces took place on July 5, 1950. Task Force Smith was named for Lt. Col. Charles B. Smith, commanding officer, 1st Battalion, 21st Regiment, 24th Infantry Division. It comprised 406 officers and men: half of the battalion headquarters company, two under-strength rifle companies (B and C), a communications section, a recoilless rifle platoon and two mortar platoons. In addition to its rifles, the task force had two 75 mm recoilless rifles, two 4.2-inch mortars, six 2.36-inch "bazooka" rocket launchers and four 60 mm

mortars.

Supporting Task Force Smith were 108 men from the 52nd Field Artillery Battalion armed with six 105 mm howitzers. Ammunition for the howitzers consisted only of high explosive rounds and six armor piercing High Explosive Anti Tank HEAT rounds. Each man was issued 120 rounds of ammunition and two days' C-rations. All the equipment was World War II vintage. All the Soldiers were from the Army of Occupation of Japan. Most of the men were 20 years old or less; only one-sixth had seen combat.

The men of Task Force Smith left Japan on the morning of July 1. Maj. Gen. William Dean, 24th Division commander, ordered Smith to block the main road to Pusan as far north as possible.

On July 4th, Task Force Smith set up a defensive position covering the road between the cities of Suwon and Osan. Shortly after 7 a.m. on July 5, a column of eight North Korean T-34 tanks, part of the 107th Tank Regiment of the 105th Armored Division, approached across the open plain from Suwon. The 105 mm howitzers first opened fire with high explosive rounds which proved ineffective against the buttoned up tanks. A single howitzer, deployed in a forward position and armed with the six HEAT rounds, then opened fire, damaging one T-34 and setting another on fire before being destroyed.

Once in range, Task Force Smith engaged the tanks with the 75 mm recoilless rifles and 2.36-inch bazookas. Neither weapon had any effect. The 2.36-inch rounds could not penetrate the armor of the T-34. Smith later said he believed that the rounds had deteriorated with age. The 3.5-inch bazooka round would have been effective, but there were none in the unit. In truth, the high-explosive rounds of these two weapons were the reason why they had no effect against the North Korean armor. The T-34's had sloped armor that was effective in deflecting shape-charged warheads. Only armor-piercing rounds could defeat sloped armor, and they were in very short supply. After raking the positions with shell and machine gun fire, killing



Photo courtesy of 1st Space Brigade

Members of the 1st Space Brigade took part in a staff ride to the site of the first battle of the Korean War between U.S. and North Korean troops.

or wounding 20 U.S. Soldiers, the North Korean column continued south unmolested.

At about 11 a.m., three more tanks were sighted advancing from the north. Behind them was a column of trucks, followed by two infantry regiments of the North Korean 4th Division. The column apparently was not in communication with the tanks that had preceded it.

It took about an hour for the head of the column to reach a point about 1,000 yards from the American position when Smith ordered fire opened. American mortars and machine guns swept the enemy column causing heavy casualties but did not stop the three tanks. These advanced to within 300 yards and raked the ridge with shell and machine gun fire.

Smith held his position as long as he dared, but casualties mounted rapidly. His men were down to less than 20 rounds of ammunition each and the enemy threatened to cut off the position. The enemy tanks were to the rear of the American position, and Smith consolidated his force in a circular perimeter on the highest ground east of the road.

The enemy was now using mortar and artillery fire. About 4:30 p.m., Smith ordered a withdrawal, remarking, "This is a decision I'll probably regret the rest of my days." Under heavy enemy fire, the poorly-trained American troops abandoned weapons and equipment in sometimes precipitous flight. Not all of them had received word of the with-

drawal, and it was at this point that the Americans suffered most of their casualties. When they reached the battery position Smith was surprised to find it intact with only Perry and one other man wounded.

The artillerymen disabled the five remaining howitzers by removing their sights and breechblocks. Then all walked to the outskirts of Osan where they recovered most of their trucks that had been hidden earlier. Fortunately there was no enemy pursuit. In the battle approximately 150 American infantrymen were killed, wounded or missing. All five officers and ten enlisted men of the forward observer liaison, machine gun and bazooka group were lost. North Korean casualties in the battle before Osan were approximately 42 dead and 85 wounded; four tanks had been destroyed or immobilized. The enemy advance was delayed perhaps seven hours.

Everyone takes something different from viewing history where it actually happened. The value of the staff ride is that one can see the terrain, walk it and get a better understanding of how things evolved from personal experience rather than the dry pages of a history book. To walk the ground where Soldiers fought and died, made good decisions and bad, and where they won and lost, has an educational benefit that cannot be achieved in a classroom. Each Soldier got something from the experience that will hopefully help them later in their careers by making them better planners, better leaders.

## History

continued from page 16

three grandchildren who also worked the farm (Archie Jr., Emma, and Lucinda).

It was in 1941 that the family had to sell the land to the government because of the building of Redstone Arsenal. The family, Eliza, brother Wallace, Emma, and Lucinda, purchased land in Madison

County located on what is now called Carter's Gin Road. Today, the property is still in the family and owned by two of Eliza's children who bought out the other relatives.

I will always admire the strength, courage, strong will and faith of my great-grandfather who did not let slavery keep him from realizing his dreams once he became free. I dare not think of what a

17-year-old African American male endured in struggling to make a living once he was freed. He had to be a hard worker, with persistence to make something of his life. Imagine, coming from slavery to eventually become a property owner, and leaving that property to his posterity. Today, that property is still a part of my great-grandfather's family as an inheritance.

# Lean @ SMDC/ARSTRAT

## Business Initiatives Office holds open house in Huntsville

The employees of the command's Business Initiatives Office hosted an Open House Jan. 25 in their new location on the first floor of the Von Braun Complex. Stacey Wilkes explains Lean Six Sigma — a business process improvement method — to Lt. Col. Alex Robinson, from the G-3 Operations Division. The Army is transforming its business methods and workforce culture to reflect best practices in the civilian industry, one of which is Lean Six Sigma.



Photo by LuAnne Fantasia



DEPARTMENT OF THE ARMY  
U.S. ARMY SPACE AND MISSILE DEFENSE COMMAND/  
ARMY FORCES STRATEGIC COMMAND  
POST OFFICE BOX 15280  
ARLINGTON, VIRGINIA 22215-0280

REPLY TO  
ATTENTION OF

SMDC-ZA

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Lean Six Sigma at SMDC/ARSTRAT

1. The personnel in SMDC/ARSTRAT have a well deserved reputation for excellence and innovation. During my tenure as Commanding General, I plan on continuing and building on that reputation. One of the ways we will maintain our world class reputation of supporting the Warfighter is to ensure we have a robust continuous improvement program. I am making Lean Six Sigma (LSS) the centerpiece of our improvement program. LSS is a proven success and is already being used by many DoD agencies and world class business operations.

2. The key to making LSS work is simple. LSS will empower everyone in this Command to make changes that maximize our value to our customer, the Warfighter. In my career, I've found that everyone has ideas that can improve some portion of a process. In SMDC/ARSTRAT, everyone, both military and civilian, will eventually serve as an LSS team member. We will use LSS principles to make rapid changes to eliminate non-value added steps in our processes and maximize our value-added contributions to the Warfighter. As a result, we will reduce costs, become more efficient in our processes, and improve the quality of our products and services.

3. We can only be successful in this endeavor if all of us pull together. I ask for your support in making our organization better.

"SECURE THE HIGH GROUND"

*Kevin T. Campbell*  
KEVIN T. CAMPBELL  
Lieutenant General, USA  
Commanding

DISTRIBUTION: A

## How does it work?

SMDC/ARSTRAT  
Business Initiatives Office

**Lean Line:  
(256) 955-LEAN (5326)  
or DSN 645-LEAN (5326)**

SMDC/ARSTRAT employees can submit suggestions for Lean Six Sigma improvement projects to the Lean Line at the phone number above. Your suggestion will be acknowledged within 24 hours, and you will be notified of the status of your idea within 48 hours.

All employees, civilian and military, are invited to call us and share your ideas. The Lean Line is managed by the Business Initiatives Office in Huntsville, Ala.

Another addition to the Lean Program is a Lean Six Sigma (LSS) SharePoint site. SMDC/ARSTRAT employees with network access can find out current information about LSS activities throughout the command at this site and/or volunteer to become a member of a LSS improvement team. The SharePoint site also provides another opportunity for employees to submit their suggestions or improvement ideas to the command for consideration.

You can find this information through the link on the CommandNet "[Lean@SMDC/ARSTRAT](mailto:Lean@SMDC/ARSTRAT)."

**955-LEAN**

# Delta Company gets 'Combative'

By 2nd Lt. Clint Rutter  
Unit reporter

**CAMP ROBERTS, Calif.** — Soldiers must be prepared to use different levels of force in an environment where the intensity of conflict may change from low to high in a matter of minutes.

To ensure Soldiers are prepared to adapt, proficiency in hand-to-hand combat is one of the fundamental building blocks for training the modern Soldier.

Army Combatives has existed since 1995, but it did not become Army doctrine until 2002. The Combatives School at Fort Benning, Ga., has been training Soldiers since 2000. More than 16,000 Soldiers have completed Level I Combatives training in the seven

years the school has been in operation.

Delta Company, 53rd Signal Battalion, conducts its own Combatives training to prepare Soldiers for high intensity conflict and to help instill courage and self-confidence. As Soldiers progress through the training, they learn the language of fighting, understanding what is happening at any time during the fight.

As a Soldier becomes more competent and confident moving through the ranges (i.e. the clinch, projectile weapon range, and striking range) the concepts of controlling the angle and the range are introduced. Soldiers are taught that the fighter who controls the range and angle can dictate what techniques dominate the fight.

According to FM 3-25.150, Combatives is an engagement between two or more persons in an empty-handed struggle or with hand-held weapons. "Hand-to-hand Combatives training will save lives when an unexpected confrontation occurs," explained Spc. Paul Preston.

Training in Combatives is grueling, physically challenging, mentally demanding and is applicable to various military situations.

"It's a work-out! I'm physically and mentally exhausted after Combatives. The next day feels like I spent three hours in the gym destroying my biceps, triceps, and abdominals," stated Sgt. Joseph Mason.

With competence comes the understanding of controlled aggression and the ability to

remain focused while under duress. To be successful, a fighter must have a strategy.

Soldiers from Delta Company utilize their Sergeants' Time Training or Physical Training sessions to train and test their skill levels in hand-to-hand combat.

"I love Combatives; I think of it as no nonsense self defense training, stated Staff Sgt. Maya Harris. "Army Combatives has helped me achieve my goal of personal safety."

Combatives is not about being able to hit someone, nor how to put someone in an arm bar, nor is it about having an attitude the size of Los Angeles. It is a matter of life skills — knowledge, awareness, appropriate behavior and the ability to apply them on the spot.

## Soldiers train to assist victims of sexual assault

By Maj. Laura Kenney  
100th Missile Defense Brigade (GMD)  
Public Affairs Officer

**BUCKLEY AIR FORCE BASE, Colo.** — When the phone rings at o'dark thirty at the home of a Soldier, rousing him or her from the deepest slumber, the first thought for those of us in uniform is, "Alert!" or, worst-case scenario, "War!" But a new possibility for middle-of-the-night rousing is now a potential for Soldiers and Airmen who recently underwent training to qualify as Victims' Advocates for military members who've suffered sexual assault.

So, if the phone rings at 2 a.m., Chief Warrant Officer Anita Thompson of the 100th Missile Defense Brigade (Ground-based Midcourse Defense) might soon afterward be speeding to a hospital or police station, ready to offer solace and critically important information to someone bruised and bloodied in spirit, and perhaps in physical form as well.

The 40-hour training course was recently offered here and was open to Active Duty and National Guard Soldiers and Airmen. Upon completion of the course, and after a background check and personal interviews, attendees are certified as military Victims' Advocates, charged with succoring wounded fellow members of their services.

The class was team taught by Jean McAllister, past executive director of the Colorado Coalition Against Sexual Assault and senior social worker during the Columbine school shooting tragedy of 1999, and Will Jenkins, the Sexual Assault Response Coordinator for the base's 460th Space Wing.

Approximately 20 members of local Army and Air Force units attended the training, some as required continued training, others as first-time learners. The training was arranged by Air Force Guard Capt. Anne Green, sexual assault response coordinator for Colorado's Guard forces, both Army and Air.

The class was interactive, with attendees voicing personal experiences or responding to the often gut-wrenching videos portraying victims and offenders. It was the emphasis on the latter that made this particular training stand out for Green.

"Other training sessions I've attended, and there have been many, focused on the

victim, and of course that's a good and appropriate focus. But in this training, we learned a lot about the offender as well, both from McAllister, who has worked extensively with them, and from the training material she presented. Understanding how and why offenders do the terrible things they do enables us to assist victims more knowledgeably," said Green.

The training dramatically highlighted society's tendency to blame the victim for the offense committed against him or her. Educating about the norms for offenders — such as the facts that the majority are repeat offenders, that they are criminals seeking opportunity versus concentrating on one particular type of victim, and that, unlike other violent criminals, sexual offenders don't "age out" of their crimes — allows the blame to shift to where it rightly belongs, onto the shoulders of the perpetrators.

McAllister read an excerpt from a poem by Marge Piercy called the Missoula Rape Poem.

*"There is no difference between being raped and being bitten by a rattlesnake except that people ask if your skirt was short and why you were out anyway."*

The fledgling Victims' Advocates were taught what they could and could not help future victims with. Information about resources available to them in both military and civilian arenas plus comfort are the main ingredients of what a Victims' Advocate may offer.

Jenkins, a retired Air Force colonel/lawyer, and now on call 24 hours as the 460th's SARC, said that the majority of the cases he's called upon to handle involve alcohol and abuse of position.

"You'll see mid-level sergeants purposefully getting new young members of the unit inebriated in order to prey upon them. This is conduct no decent man would engage in, and they are an offense to the uniform that so many of us who wear it take pride in. The best way to halt this type of offense is for people to become aware of it, and to step in and stop situations they see developing. That is true caring for a team-member," said Jenkins.

The class was largely composed of women, but there were also male attendees. One had previously handled a case involving a male victim. Although

most cases involve a female victim, the program is set up to help anyone who has suffered sexual assault, regardless of gender.

McAllister taught that the main role of the advocate is to empower the victim on the path to survivorship.

"The trauma experienced in this type of crime has been discovered to be second in severity only to that suffered in prolonged, active combat, to use a comparison that should resonate with those of you in uniform. Your role is to meet them where they are at emotionally, to celebrate their courage in stepping forward, and to offer them choices. Choices are critically important to victims of this type of crime, as choice is what was so horribly taken away from them."

"There is no more personal crime, short of murder, than rape. After that, imagine having to tell all the intimate details of the experience, first to friends, then the police, then a doctor, then a nurse, then lawyers, then... court, where the offender sits looking at you. Coming forward to tell this story is an act of tremendous bravery," said McAllister.

Actual footage of offenders bragging about how they stalked their victims, tapes of 9-1-1 calls from terrified victims, and horrifying statistics — all took the class far from the typical military classroom environment.

Thompson found the training worthwhile.

"It was very well put together, and I enjoyed getting the somewhat different perspective offered by the male participants. The people selected to become Victims' Advocates seemed good choices, as all appeared to genuinely care," said Thompson.

And caring is what will be asked of the future advocates, said Jenkins.

"When that phone rings in the middle of the night, I expect you to grab your ditty bag and meet me. If you cannot drop everything and run to help, I don't need you. The victims need you when they are bleeding, when their hearts are broken. I will be leaving you in a hospital with someone who is wounded. I can't predict where your particular journey will take you, but it is a good thing that you will do. Together, we must build nets under these people who have suffered so terribly, so that they are not lost."

## Helping others out

By Capt. Michael Euperio  
Unit reporter

**PETERSON AIR FORCE BASE, Colo.** – Fundraisers are nothing new for Family Readiness Groups. Many FRGs raise funds to support future social events and community service projects, but a recent tragedy gave the 53rd Signal Battalion, Headquarters and Headquarters Company (HHC), FRG an unexpected opportunity to make a real difference for some families in their community.

A fundraiser was planned at Building Three on Peterson Air Force Base that would showcase an assortment of diverse chili and soups. However, it was delayed a week due to inclement weather, with the makeup date set for Jan. 19.

Three days earlier, a fire broke out in the early morning hours at the Castle West Apartment Complex in Colorado Springs, killing two residents and displacing more than 300 individuals during the bitter cold of winter. Snow and freezing temperatures made putting out the fire a daunting task, and the fire burned several days destroying the complex and the personal belongings that were located inside.

The Colorado Springs community joined together to ensure that the displaced families had help starting their lives over from scratch. The American Red Cross and the



Photo by Ed White

Maj. Victoria Miralda helps herself to a bowl of soup during a Headquarters and Headquarters Company's, 53rd Signal Battalion (SATCON), Family Readiness Group fundraiser. The event raised more than \$300 in just over an hour, with profits going to assist local families who were displaced from their homes by a tragic fire at the Castle West Apartments in Colorado Springs, Colo.

local Rock Family Church spearheaded collecting donations of outerwear, linens, furniture and other household goods.

An overwhelming response by locals to a plea for donated items actually led to a surplus, and the FRG could no longer donate hard goods. But they still wanted to assist the victims in some way.

"It's amazing to see how such a terrible event brings so many people together," declared Tammy Parsons, HHC's FRG co-leader. "I know many others would do the exact same thing for my family if I was in their shoes, so I just

wanted to help out as much as possible."

The FRG ended up donating \$25 gift cards from Target and Wal-Mart to multiple families from the apartment complex. The value of the gift cards is twofold because they can be used for either household items or groceries. Although most knew their money was going to a great cause, all donators at the fundraiser undoubtedly were satisfied with the quality of the chili and soups available. The fundraiser was slated to last two hours, but all the buffalo, turkey and spicy chili as well as the crab bisque and Tuscan

soups were completely gone in just over an hour.

Capt. Erich Atkins, 1st Space Battalion S4, stated, "I need to get my fiancée the recipe to the buffalo chili and Fat Tire beer bread because I could eat that for days. Everyone knows I like to eat!"

**Note: The 53rd Signal Battalion, Headquarters and Headquarters Company, Family Readiness Group thanks everyone who donated to the event and made it possible to truly help others in need.**

## Borja is tapped as new command sergeant major

SMDC/ARSTRAT  
Public Affairs

Command Sgt. Maj. Ralph C. Borja will become the command's top enlisted Soldier. He will replace Command Sgt. Maj. David L. Lady, who is retiring.

Borja comes to the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command from Fort Drum, N.Y., where he has served as division command sergeant major for the 10th Mountain Division (Light Infantry) since August 2004.

This month, Borja returned from a yearlong deployment in Afghanistan where he served as the Combined Joint Task Forces 76th Ground Forces command sergeant major.

Borja was born in Agana, Guam. He enlisted in the U.S. Army after graduating from high school in 1979 and completed Basic Training and Advanced Individual Training at Fort Benning, Ga.

He has served in the Army for more than 28 years in various Airborne Ranger and Light Infantry assignments throughout the United States and overseas.

His military education includes Basic Airborne Course, Small Arms Weapons Repair Course, Ranger School, Jump Master Course, Pathfinder Course, Air Assault Course, Jungle Operations Training Course, Special Operation Training Course, Battle Staff Course, Primary, Basic and Advance Noncommissioned Officer Course, First Sergeant Course and the United States Army Sergeants Major Academy.

His awards and decorations include the Bronze Star Medal, Purple Heart, Meritorious Service Medal with three oak leaf clusters, Army Commendation Medal with one oak leaf cluster, Army Achievement Medal with two oak leaf clusters, Good Conduct Medal (8th Award), National Defense Service Medal with bronze star, Armed Forces Expeditionary Medal with bronze star and arrowhead, Global War on Terrorism Expeditionary Medal, Global War on Terrorism Service Medal, Noncommissioned Officer's Development Ribbon with numeral 4, Army Service Ribbon, Overseas Service Ribbon with numeral 2, Valorous Unit Award and the Joint Meritorious Unit Award.

He has earned the Combat Infantryman's Badge, Expert Infantryman's Badge,



Command Sgt. Maj. Ralph C. Borja

Pathfinder Badge, Air Assault Badge, British and Canadian Foreign Airborne Wings, Order of Saint Maurice Medallion (Centurion), Coveted Ranger Tab and the Master Parachutist Badge with two Combat Jump Stars.

# New TA-50 inspires Delta Company Soldiers

## Delta Company 53rd Signal Battalion

**CAMP ROBERTS, Calif.** — Recently, a squad-size element of Delta Company, 53rd Signal Battalion, tested the capabilities of their newly assigned TA-50 during a squad level Field Training Exercise, which included a night op and a bivouac.

To begin the exercise, the squad leader conducted a risk assessment and the Soldiers received a safety briefing, then set out to the bivouac site.

Maintaining tactical readiness, intervals, and observing noise discipline the Soldiers made their way to approximately half a click from the bivouac site, at which point the team leader signaled a halt.

"We need to conduct a recon

of the site," Sgt. Kevin Beck whispered to the squad.

With that Staff Sgt. Matthew Blumer, the squad leader, 2nd Lt. Clint Rutter, the platoon leader, and Spc. Nathan Crandell, the gunner, tactically moved to the site.

"As we made our way to the site, the rest of the squad went to the prone and maintained 360° security. The three of us bounded and covered our way forward until we made it to the bivouac site and secured it," explained Crandell.

When they arrived, they setup the shelter halves and unpacked their gear.

After settling in, Blumer gave the Squad an operational order brief and explained the sand table, pointed out where the checkpoints were, and

where the enemy was expected to be. The Squad then set out on their night ops tactical march maintaining a three-meter interval due to visibility.

Shortly after, the Soldiers made their way to the known enemy logistics route. There, the Soldiers did a visual recon of the area, IAW Fm7-1, maneuvered tactically around the area, and rendezvoused on the other side.

When all were safely on the other side, Spc. Salvador Cota informed headquarters of the situation and gave an ACE report (assessment of combat effectiveness). At that time, the headquarters ordered the squad to move back to the bivouac site.

Upon returning to the site, the Soldiers settled into their

shelter halves and left one Soldier on guard duty, changing out every hour and a half. With only a few minor noise incidents, the night passed safely and in the morning the Soldiers headed back to headquarters.

"Aside from the loud cougars, the rattlesnake, and the annoying raccoons, the bivouac was informative and interesting," said Spc. Derek Maggard, the newest member to the squad.

Rutter, when asked how he felt about his participation in the Squad FTX, responded, "Officers at every level are responsible for training. Every training event is a leader development opportunity, I'm looking to learn and contribute more as I gain experience."

# Alpha Detachment conducts mobilization exercise

## By Staff Sgt. Brian Sibila Unit reporter

**STUTTGART, Germany** — Deployment is always a possibility. Practice makes perfect. MOBEX06 (mobilization exercise 06) was conducted to ensure the Soldiers and Sailors of Alpha Detachment, 1st Space Company, can quickly and effectively deploy a Joint Tactical Ground Station system.

The exercise started with an early morning recall from the detachment commander and first sergeant at 4 a.m. local time. Detachment personnel were to be at the detachment headquarters, located at Kelley Barracks, Germany, for an inspection of all Soldiers' equipment and Soldier readiness processing packets.

The entire detachment arrived at the unit within one hour and 38 minutes from the initial recall time. After an inspection of A and B bags straight from a prescribed MOBEX packing list, the bags were loaded onto one of the unit's two new Medium Tactical Vehicles.

Upon completion of inventories, the detachment proceeded to the unit barracks for a class on room inventories and closures. The class was given by the detachment first sergeant, Sgt. 1st Class Keese E. Pond. Many experienced non-commissioned officers were on hand to help facilitate learning.

Weapons/Mask Preventive Maintenance Checks & Services was the next event of the day. With the unit armorer, Staff Sgt. Richard Kruse, supervising operations, all weapons were inspected for serviceability before being lubricated and stored back into the arms room.

After the weapons were stored, the unit nuclear, biological and chemical NCO, Staff Sgt. Joseph Collins, conducted a protection assessment system test on all individually assigned M40 gas masks, checking for proper fit and serviceability.

Day two began with the pack up of all JTACS shelter equipment. After a briefing on march order procedures by the operations sergeant, Sgt 1st Class Richard Buchfink, crews began march ordering the system in accordance with proper manuals meeting the required time of three hours. Individual crews were assigned specific tasks to accomplish, which had been practiced the month before during Phase 1 of the operation (a pre-MOBEX train-up).



Photo courtesy of 1st Space Company, JTACS-EUR

**Staff Sgt. Joseph Collins with the 1st Space Company in Stuttgart, Germany directs Soldiers as they move the Joint Tactical Ground Station shelter safely out of the bay during MOBEX 06.**

Sgt. Brian Sibila, chief of Charlie crew, commented, "The pack-up time was better than expected due to the prior month's practice."

With all equipment packed, pre-combat checks and inspections were conducted for all unit vehicles prior to loading. All the equipment was loaded onto the trucks according to the load plans, and trucks were assembled in convoy configuration.

Day three started bright and early with a 5 a.m. formation and the detachment in full battle rattle. Alpha detachment kicked off the day with a before-PMCS on all the equipment.

At 7 a.m., the detachment received a convoy brief on the route from the training and evaluation NCO, Staff Sgt. Gerald Forgione, with the 1st Space Brigade commander, Col. Timothy Coffin, in attendance. Once the convoy brief was complete, personnel loaded equipment and conducted last minute checks, and then it was time to start movement.

At 8:15 a.m., the convoy left to a local airfield, with two military police escorts

provided by 6th U.S. Army Garrison leading the way. The detachment made it safely to the airfield and back home to Kelley Barracks. The time was 9 a.m., and Coffin was observing the unit put its standard of teamwork to a final test with an emplacement of all equipment.

When asked by Coffin, what are your expectations for your personnel, Buchfink replied, "I know what my people can do. They will set a new record with two hours and 40 minutes, Sir."

His "people" did not let him down, coming up to an operational status in two hours and 37 minutes, breaking JTACS-Europe's previous record of three hours and 20 minutes.

The MOBEX was a great learning experience for many of the Soldiers and Sailors of Alpha Detachment, 1st Space Company. Working as a team proved to be strength of the unit. All objectives were completed and Joint Tactical Ground Station Europe proved its worth as a mobile theater asset to the space community.

**FIRST DETECT, FIRST REPORT!**

# Safety

## Tornado safety tips:

### SMDC/ARSTRAT Safety Office

When a tornado is coming, you have only a short amount of time to make life-or-death decisions. Advance planning and quick response are the keys to surviving a tornado.

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm (or sometimes as a result of a hurricane) and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The damage from a tornado is a result of the high wind velocity and wind-blown debris. Tornado season is generally March through August, although tornadoes can occur at any time of year. They tend to occur in the afternoons and evenings: over 80 percent of all tornadoes strike between noon and midnight.

When a tornado threatens, individuals need to have a safe place to go and time to get there. Even with advances in meteorology, warning times may be short or sometimes not possible. Lives are saved when individuals receive and understand the warning, know what to do, and know the safest place to go.

### Before

Conduct tornado drills each tornado season. Designate an area in the home as a shelter, and practice having everyone in the family go there in response to a tornado threat.

Discuss with family members the difference between a "tornado watch" and a "tornado warning" — a *tornado watch* is issued by the National Weather Service when tornadoes are possible in the area; a *tornado warning* is issued when a tornado has been sighted or indicated by weather radar.

### Have disaster supplies ready

- Flashlight and extra batteries
- Portable radio and extra batteries
- First aid kit and manual
- Emergency food and water
- Nonelectric can opener
- Essential medicines
- Cash and credit cards
- Sturdy shoes

### Develop an emergency communication plan

In case family members are separated from one another during a tornado (a real possibility during the day when adults are at work and children are at school), have a plan for getting back together.

Ask an out-of-state relative or friend to serve as the "family contact." After a disaster, it's often easier to call long distance. Make sure everyone in the family knows the name, address, and phone number of the contact person.

### Learn tornado danger signs

- An approaching cloud of debris can mark the location of a tornado even if a funnel is not visible.
- Before a tornado hits, the wind may die down and the air may become very still.

Tornadoes generally occur near the trailing edge of a thunderstorm. It is not uncommon to see clear, sunlit skies behind a tornado.

### During

#### If at home:

- Go at once to a windowless, interior room; storm cellar; basement; or lowest level of the building.
- If there is no basement, go to an inner hallway or a smaller inner room without windows, such as a bathroom or closet.
- Get away from the windows.
- Go to the center of the room. Stay away from corners because they tend to attract debris.
- Get under a piece of sturdy furniture such as a workbench or heavy table or desk and hold on to it.
- Use arms and hands to protect head and neck.
- If in a mobile home, get out and find shelter elsewhere.

#### If at work or school:

- Go to the basement or to an inside hallway at the lowest level.
- Avoid places with wide-span roofs such as auditoriums, cafeterias, large hallways or shopping malls.
- Get under a piece of sturdy furniture such as a workbench or heavy table or desk and hold on to it.
- Use arms to protect head and neck.

#### If outdoors:

- If possible, get inside a building.
- If shelter is not available or there is no

time to get indoors, lie in a ditch or low-lying area or crouch near a strong building. Be aware of the potential for flooding.

- Use arms to protect head and neck.

#### If in a car:

- Never try to out drive a tornado in a car or truck. Tornadoes can change direction quickly and can lift up a car or truck and toss it through the air.
- Get out of the car immediately, and take shelter in a nearby building.
- If there is no time to get indoors, get out of the car and lie in a ditch or low-lying area away from the vehicle. Be aware of the potential for flooding.

### After

- Help injured or trapped persons.
- Give first aid when appropriate.
- Don't try to move the seriously injured unless they are in immediate danger of further injury.
- Call for help.
- Turn on radio or television to get the latest emergency information.
- Stay out of damaged buildings. Return home only when authorities say it is safe.
- Use the telephone only for emergency calls.
- Clean up spilled medicines, bleaches, or gasoline or other flammable liquids immediately. Leave the buildings if you smell gas or chemical fumes.
- Take pictures of the damage — both to the house and its contents — for insurance purposes.

Remember to help your neighbors who may require special assistance — infants, the elderly and people with disabilities.

## The 25 deadliest U.S. tornadoes

Date	Place	Deaths
March 18, 1925	Tri-State (Mo., Ill., Ind.)	689
<b>May 6, 1840</b>	<b>Natchez, Miss.</b>	<b>317</b>
May 27, 1896	St. Louis, Mo.	255
<b>April 5, 1936</b>	<b>Tupelo, Miss.</b>	<b>216</b>
April 6, 1936	Gainesville, Ga.	203
<b>April 9, 1947</b>	<b>Woodward, Okla.</b>	<b>181</b>
April 24, 1980	Amite, La.; Purvis, Miss.	143
<b>June 12, 1899</b>	<b>New Richmond, Wis.</b>	<b>117</b>
June 8, 1953	Flint, Mich.	115
<b>May 11, 1953</b>	<b>Waco, Texas</b>	<b>114</b>
May 18, 1902	Goliad, Texas	114
<b>March 23, 1913</b>	<b>Omaha, Neb.</b>	<b>103</b>
May 26, 1917	Mattoon, Ill.	101
<b>June 23, 1944</b>	<b>Shinnston, W.Va.</b>	<b>100</b>
April 18, 1880	Marshfield, Mo.	99
<b>June 1, 1903</b>	<b>Gainesville &amp; Holland, Ga.</b>	<b>98</b>
May 9, 1927	Poplar Bluff, Mo.	98
<b>May 10, 1905</b>	<b>Snyder, Okla.</b>	<b>97</b>
April 24, 1908	Natchez, Miss.	91
<b>June 9, 1953</b>	<b>Worcester, Mass.</b>	<b>90</b>
April 20, 1920	Starkville, Miss.; Waco, Ala.	88
<b>June 28, 1924</b>	<b>Lorain &amp; Sandusky, Ohio</b>	<b>85</b>
May 25, 1955	Udall, Kan.	80
<b>Sept. 29, 1927</b>	<b>St. Louis, Mo.</b>	<b>79</b>
March 27, 1890	Louisville, Ky.	76

# Echo Company trains Soldiers to save lives

By Sgt. Keisha Bennet  
Unit reporter

**FORT BUCKNER, Okinawa, Japan** — Life and death are in the balance when out on the battlefield. That is why it's important for Soldiers to be trained on what to do if a fellow comrade were wounded. A recent Combat Life Saver class was conducted at Echo Company, 53rd Signal Battalion, with attention-grabbing subjects and new techniques being taught.

The instructors, who came from Korea, taught the 40-hour block and came well prepared. A long way from home, they stayed motivated and qualified more than ten new-to-the-Army Soldiers and recertified even more. The new techniques were taught in both written and hands-on form, leading to an interesting class.

Although most of the information was in a book, the instructors also had a slideshow which included real life pictures of some of the injuries Soldiers are facing in Iraq today. Getting a familiarization with what to look for and



An instructor looks on as Staff Sgt. Joseph Barmore attempts to insert a needle into Sgt. Ernest Mari's arm.

actually seeing it affected the Soldiers and made the class more attentive. Along with the slideshow, the class also worked with a test dummy, bandages, needles and other medical supplies. The students were taught many things from the new steps to evaluating a casualty, a chest injection, a 9-line MEDEVAC call,

and many ways to carry an injured battle buddy, just to mention a few. Students were individually walked through each step and given acronyms to assist in the memorization. Questions were answered and discussions were always encouraged.

The most exciting part of any Combat Lifesaver class is when

professionalism of the instructors and their method of interactive teaching also impressed the students and the company leadership who frequently checked on the class.

All the students learned something invaluable to a Soldier — skills that one day may be used to save someone's life.

Soldiers learn to give an IV or a saline lock. Many of the Soldiers were a first time go when sticking their partners. To make the class more realistic (as in a wartime situation) the lights were dimmed and the pressure was on. Although some lost a little more blood than they may have wanted to, everyone passed the course.

The class was very educational for the participants who took in a lot of useful information on how to aid a buddy in many different kinds of situations. The

## Army Space elements maintain presence in OEF/OIF

By Ed White  
SMDC/ARSTRAT Public Affairs

**PETERSON AIR FORCE BASE, Colo.** — Space Soldiers of the 1st Space Brigade have fought in the Global War on Terror since its beginning, and a steady stream of year-long deployments continue with Space Soldiers going to OPERATION ENDURING FREEDOM and OPERATION IRAQI FREEDOM to provide key space support to the warfighter.

The 1st Space Brigade is composed of three battalions. The 1st Space Battalion and the 117th Space Support Battalion deploy in theater and provide a variety of direct support capabilities. The 53rd Signal Battalion (SATCON) has ground stations positioned around the globe and provide key 24/7/365 long-haul communications to all levels of the government from the White House on down throughout the Department of Defense and other government agencies.

Recently the brigade said farewell to three groups of Soldiers and one individual Soldier who deployed to support the wars in Iraq and Afghanistan.

"Our Soldiers and Sailors are the front line of space capabilities that provide key planning and operational support directly to the warfighter," said Col. Timothy Coffin, 1st Space Brigade commander. "These dedicated individuals continue to impress their supported commands with their drive, determination and abilities. They bring space to the table and make it a tangible thing that a commander can use to prosecute the fight in new and innovative ways."



Sgt. Halie Burk receives a farewell hug at the airport as she departs for a tour of duty in support of OPERATION IRAQI FREEDOM.

Speaking to the group of well wishers who came out for the departure ceremony, Lt. Col. Lee Gizzi, commander of the 1st Space Battalion said, "We have had an unbroken presence in this fight since the beginning. This tells me that the support we bring to the warfighter is critical to mission accomplishment. It also tells me that our Soldiers are giving 110 percent over there every single day."

Another one of the deployed elements comes from the Colorado Army National Guard's 117th Space Support Battalion.



Spc. Aric Armstrong spends one last minute with his daughter before deploying in support of OPERATION IRAQI FREEDOM.

The Guard is not new to space support deployments as another group from the 117th is already in theater providing support. Citizen Soldiers play a crucial role in providing space support to the warfighter.

"These three battalions are each unique in their purpose, their capabilities and the support they bring to the table. What they have in common are the dedicated Soldiers, civilians and contractors who make it all happen," Coffin said.

Photo by Sgt. Albert Gil de la Madrid

Photos by DJ Montoya

# Promotion day!

➔ Col. Deborah Hubbard renews Maj. Glenn Henke's Oath of Office during a promotion ceremony Jan. 5 at the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command's headquarters in Arlington, Va. Henke is the Ballistic Missile Defense Emerging Systems Division chief. Hubbard is currently serving as the Ballistic Missile Defense System Manager (BMDSM).



Photo by John Upp



Photo by Dottie White

➔ Lt. Col. Rob Phillips stands as his wife, Stephanie, and Col. Kendal Cunningham, deputy chief of staff for G-3 Operations and Plans, pins on his rank. Phillips' wife, father, step-mother and three children were all present for his promotion to lieutenant colonel Feb. 2. "I'm getting promoted on Groundhog Day!," Phillips quipped during his speech.

⬅ After removing his jacket, Lt. Col. Rob Phillips kneels as his father, Bob; step-mother, Denise; and four-year-old twins, Christian and Shanna, pin on his rank during a promotion ceremony on Redstone Arsenal, Ala., Feb. 2. His older daughter, Jordan, 5, pins Phillips' rank on his beret. Phillips works in the G-3 Operations Division, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command.



Photo by Dottie White



Photo by Ed White

⬅ Kirby Brown presents Sgt. 1st Class Richard L. Buford with a certificate of promotion during a ceremony promoting him to the grade of E-7. The promotion ceremony was held in the vehicle bay at the Space and Missile Defense Battle Lab where Buford works in Colorado Springs, Colo. Attaining the rank of sergeant first class is a milestone event in any noncommissioned officer's career. Reaching that rank with only seven years of service is phenomenal.



# Joint training exercise demonstrates air defense expertise, operational capabilities

SMDC/ARSTRAT Public Affairs

**HUNTSVILLE, Ala.** — The Interservice/Industry Training, Simulation and Education Conference, or I/ITSEC, is an annual conference that brings together over 4,000 federal and industry people to compare current and leading edge technologies and computer simulations.

The conference, held Dec. 4-7, was the first time SMDC/ARSTRAT was invited by the U.S. Joint Forces Command to lead Army Air Defense Artillery participation in a live joint and international demonstration.

“The best description of the exercise is a joint virtual training special event,” said George “Moody” Parsons, of the command’s Technical Interoperability and Matrix Center. “This year’s live exercise highlighted homeland defense with a focus on homeland air and cruise missile defense.”

Parsons explained how this event helps the command develop training improvements and supports evaluation of systems and concepts to support the warfighter’s current and future needs. Training exercises were played several times a day and coordinated from the main [U.S. Joint Forces Command’s] conference booth. Soldiers from the 164th Air Defense Artillery Brigade of the Army National Guard in Orlando, Fla., demonstrated their air defense expertise and operational capabilities from the SMDC/ARSTRAT booth.

“They used their unit’s Stinger MANPADS and Avenger training systems to identify and engage simulated terrorist unmanned aerial vehicles/cruise missiles targeted against vital locations in the defended area,” Parsons said. “Only a few visitors were willing to spend much time with the 65-pound Stinger Trainer on their shoulder, but many were given the opportunity to operate the trainers ... and they all walked away with a new appreciation for our Soldiers and their training and capability.”

## Targets flew ... players were scattered

- Computer generated targets flew on a target simulator located in the Navy Air Systems Command booth, or NAVAIR.
- Command and control was at a centralized U.S. Joint Forces Command location.
- Distributed — physically separated — players were linked by a data, audio, and



George “Moody” Parsons, under direction of the Soldiers from the 164th ADA, operates the Stinger Troop Proficiency Trainer (STPT) against simulated threats during the Interservice/Industry Training, Simulation and Education Conference, or I/ITSEC, Dec. 4-7.

voice network established within the convention center, providing connectivity similar to that required to link joint exercise locations in Alabama, Florida, South Carolina, Iowa, Virginia, New Mexico, Texas, the Pentagon and other units during the live training events.

- The conference center’s network allowed attendees to view the Soldiers’ live engagement by audio and closed circuit video teleconference capabilities at the main Joint Forces Command’s booth and throughout the conference center.

Parsons said it took a four-month spin-up period of preparations and rehearsal in the command’s Simulation Center here to nail the four-day success.

“During our ramp up, we coordinated with the Joint Forces command in Virginia; NAVAIR in Florida; North American Aerospace Defense Command, or NORAD, and Air Forces Northern, which is also in Florida,” he said.

“That level of coordination refines your use of nationwide data and voice network — both crucial to live training exercises.

Col. Michael Armstrong is chief of the joint training technology group at the U.S. Joint Forces Command’s joint warfare center. As an Army and Joint officer, he expressed his personal pride to the 164th ADA Brigade Soldiers for their professionalism and support.

“I appreciate SMDC/ARSTRAT and the Army’s continuing support to Joint Forces Command’s training and your ability to respond to last minute changes and new requirements. This [training] experience had laid a firm groundwork for future joint training with SMDC/ARSTRAT, and I look forward to our continued participation,” Armstrong said.

Dr. Linda Beach, from the command’s Future Warfare Center, and Parsons were the senior command representatives. Contractor personnel from Raytheon, Madson Research Corporation, and Scientific Research Corporation contributed significantly to SMDC/ARSTRAT’s success in demonstrating the effectiveness and value of joint training in a distributed environment, for continued success of U.S. warfighter capability.

## SMDC/ARSTRAT commanding general visits Fort Greely

By Sgt. Jack W. Carlson III  
Unit reporter

**FORT GREELY, Alaska** — Lt. Gen. Kevin T. Campbell, commanding general, U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, recently paid his first visit to Fort Greely since his assumption of command Dec. 18.

Campbell, accompanied by the command’s top non-commissioned officer, Command Sgt. Major David Lady, spent Jan. 23 and 24 on the ground here touring the

installation and Missile Defense Complex as well as meeting with Soldiers and families.

While eating lunch with Campbell, members of the Fort Greely Family Readiness Group spoke to the commander on various subjects including quality of life on post and community events.

“We work everyday as though our Soldiers were deployed to ensure the quality of life is met for the Soldiers and families,” said Patricia Carson, FRG Leader.

Following the FRG briefing,

Campbell left the Family Readiness Group members with his commander’s coin for excellence, and also some advice.

“The bottom line above all else is that taking care of Soldiers and their families has to be the top priority ... if your families are happy then so are your Soldiers,” Campbell said.

The afternoon’s business included a tour of the Missile Defense Complex during which Campbell went into a Silo Interface Vault, toured the Missile Assembly Building and ended the day at the Readiness

and Control building.

Once inside, the general met with the war fighters in charge of manning the Ground-Based Midcourse Defense System and securing the Missile Defense Complex.

“General Campbell asked a lot of questions and was very interested in the ways that manning requirements affect Soldiers working on the Missile Defense Complex,” said Sgt. Robert Carson, a military police officer in Alpha Co., 49th Missile Defense Battalion, (Ground-based Midcourse Defense).



Braving the frigid temperatures of 40 below zero, Brig. Gen. James W. Nuttall, deputy director of the Army National Guard, descends into a Silo Interface Vault on the Missile Defense Complex on Fort Greely.

## Deputy director of National Guard Bureau visits 49th Missile Defense Battalion

Story and photos by  
Sgt. Jack W. Carlson III  
Unit reporter

**FORT GREELY, Alaska** -- Brig. Gen. James W. Nuttall, deputy director of the Army National Guard, visited Soldiers of the 49th Missile Defense Battalion (Ground-based Midcourse Defense) and their families here Jan. 9.

Upon arriving, Nuttall was greeted not only by the senior leadership of Fort Greely but also some of the coldest temperatures recorded for the year. With overnight lows at 48 below zero, Nuttall wanted to experience what Soldiers on the ground go through on a day-to-day basis.

"I intentionally chose to come here at this time of the year; it will help me truly understand what Soldiers have to endure during the winters here," Nuttall said.

Once on the ground, the deputy director attended multiple briefings on the status of the missile defense programs, the Fort Greely Garrison, and the accomplishments of the 49th. The

Battalion Family Readiness Group (FRG) also briefed Nuttall over lunch, highlighting the role of the FRG in the Battalion.

"Clearly the 49th must be considered a forward deployed unit ... we have a capability and families on the ground; this is a large step forward from the unit's inception," Nuttall said when speaking to Soldiers and family members.

Following the lunch, Nuttall was escorted onto the Missile Defense Complex where he climbed down into a Silo Interface Vault, toured the Missile Assembly Building, and was shown a training run on the GMD Systems Trainer.

The GST trains warfighters at the battalion with high fidelity simulations to train and practice conducting missile defense battle drills against a limited Intercontinental Ballistic Missile threat.

"It is obvious that this is no longer an initial capability, we are now operational and the National Guard will be sustaining this mission for years to come," Nuttall said.

## HELSTF – Home of the MIRACL and THEL Laser Systems

By Mark Hubbs  
SMDC/ARSTRAT Historical Office

**A**lthough the High Energy Laser Systems Test Facility is known for cutting edge laser development and testing, the site's history began long before the days of laser technology.

In 1960, the Army began to develop phased controlled scanning radars, what we call now "phased array radars." The Army Rocket and Guided Missile Agency (ARGMA), the parent organization for the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command's predecessor unit the Nike-Zeus Project Office, began construction of the Multifunction Array Radar (MAR) prototype at White Sands Missile Range, N.M., in 1963.

The success of the MAR and the testing at WSMR provided a great deal of data that was used to refine the technology later used in the Perimeter Acquisition Radar, deployed as part of the SAFEGUARD anti-ballistic missile system. The MAR continued testing until 1969 when operations ceased, and it went into caretaker status.

In 1974, Congress directed the Department of Defense to create a "national" tri-service high energy laser facility to consolidate equipment and work conducted at various government and contractor facilities.

The command's former Multifunction Array Radar site at WSMR was chosen in 1981 as the new HELSTF facility. The steel shielding and extensive below ground space in the MAR lend itself well for conversion to this new endeavor. The mission of the HELSTF was to support DoD laser research, development, test and

evaluation. It was also to integrate and operate lasers and related instrumentation, facilities, and support systems and to conduct and evaluate the effect of lasers on materials and weapons.

The MIRACL was the first megawatt-class, continuous wave, chemical laser built in the free world. It along with the Sea Lite Beam Director (SLBD) had originally been developed by the Navy and was transferred to HELSTF in 1984.

The MIRACL is a deuterium fluoride chemical laser with the highest continuous power output yet achieved by any U.S. laser. The laser is almost like a rocket engine designed to produce an optically uniform downstream flow field as a lasing medium. An oxidizer is reacted with a fuel mixture and ignited in its combustor to produce fluorine. Deuterium is then injected into the flow to chemically combine with the fluorine atoms and

produce excited deuterium fluoride molecules upon which the lasing is based.

The HELSTF became operational on Sept. 6, 1985, when the MIRACL-SLBD was used for an Air Force lethality test where it lased and destroyed a Titan missile booster. MIRACL-SLBD operations continued with more demanding tests, including the first test against a dynamic target when an Air Force aircraft drone was destroyed in flight on Sept. 2, 1987.

At the direction of the secretary of the Army, responsibility for HELSTF passed from the Army Materiel Command to the U.S. Army Strategic Defense Command (USASDC) on Oct. 1, 1990. USASDC was chosen in a desire to consolidate Army strategic test facilities under one command (USASDC already managed Kwajalein Missile Range).

See *HELSTF* on page 27



The Solid State Heat Capacity Laser

Photo courtesy of U.S. Army

# Directed Energy ... Where did we begin?

By Sharon Watkins  
SMDC/ARSTRAT Historical Office

In 1983, President Ronald Reagan announced his Strategic Defense Initiative (SDI). It was soon derided by opponents who saw the use of innovative directed energy technologies as nothing more than the stuff out of "Star Wars."

Even before George Lucas' film achieved unprecedented success at the box office, however, the Ballistic Missile Defense Advanced Technology Center, a U.S. Army Space and Missile Defense Command/Army Forces Strategic Command (USASMDC/ARSTRAT) predecessor, had already begun to explore the potential of directed energy — neutral particle beams and lasers — in both sensor and interceptor applications.

The Army began to research neutral particle beam (NPB), then known as high energy beam, technology in 1974. Both endo- and exo-atmospheric options were initially considered for a potential NPB system. Proof of principle experiments were conducted in 1980 and the space-based concept was ultimately selected for further development.

In the 1980s, the NPB was incorporated into the SDI architecture. An NPB would deliver the neutral hydrogen atoms at near the speed of light to penetrate the target and disrupt or destroy the electronic circuits and/or ignite the warhead.

The program continued to progress and in 1989 Beam Experiments Aboard a Rocket program demonstrated the capability of an accelerator to operate outside the atmosphere and in 1993, the NPB completed its final demonstration program. At the same time, the deployment concept for missile defense was redefined and reducing funding for several programs including Directed Energy. These factors tied to issues related to the required size and weight of the NPB end product and resulted in the redirection of DE efforts toward laser technology.

The command also initiated its laser research programs in the early 1970s. These early programs explored the feasibility of laser radar or lidar technology, the lasers sensors. Products which employ these types of technologies

have since become a common feature in our world. A separate study begun at the same time addressed the development of BMD laser systems for the post-boost, midcourse and terminal defense.

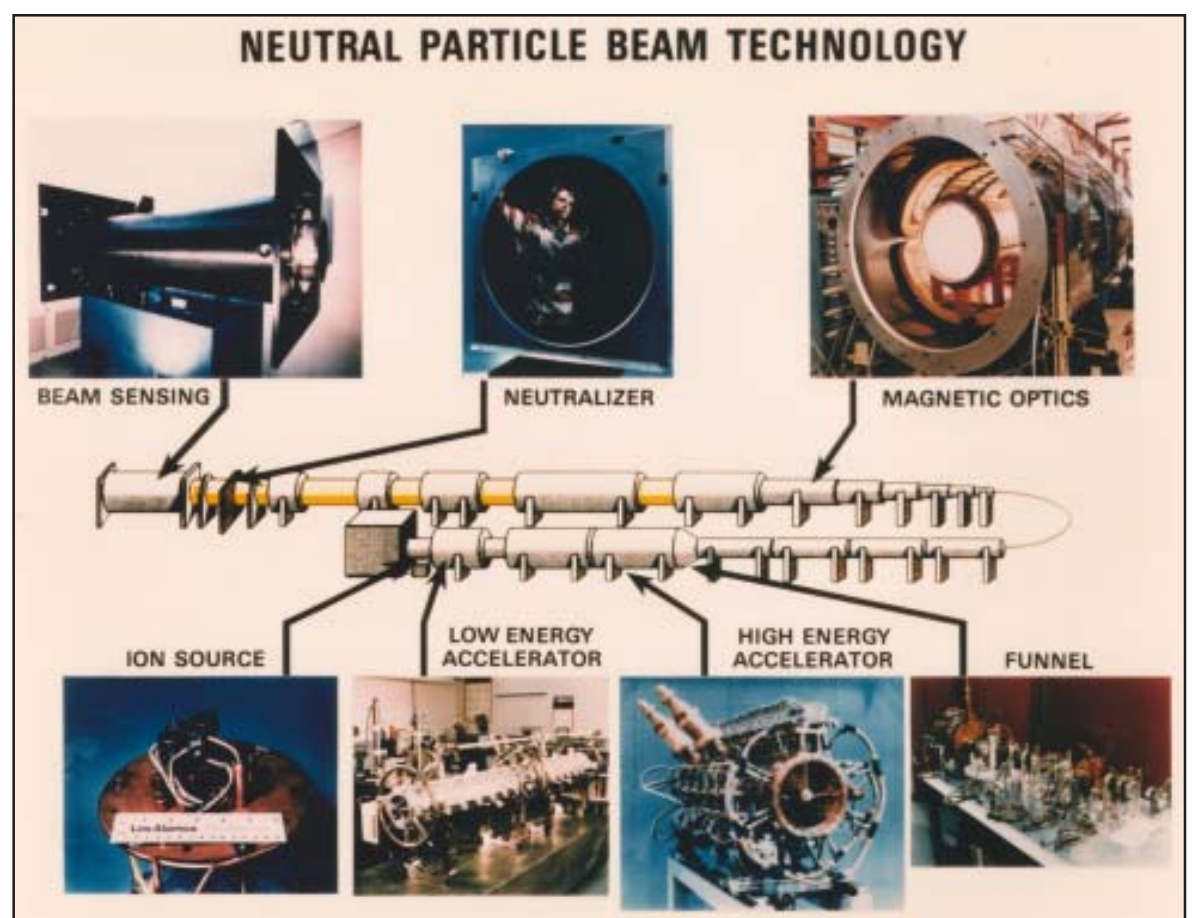
By the end of the decade researcher had demonstrated that lasers could work in conjunction with pointing and tracking devices to form an effective weapons system.

In 1986, the command's largest directed energy program was the ground based free electron laser (FEL) technology integration experiment. As part of the SDI architecture, the goal was to develop a system, either radio frequency or induction FEL, that could intercept a missile in the boost phase or a satellite by bouncing a laser beam off relay mirrors in space.

As a result of repeated budget cuts the GBFEL facility was closed soon after it

opened. Despite this set-back, high energy laser research has continued at SMDC. The successes are well known — the High Energy Laser Systems Test Facility's, or HELSTF's, satellite lethality experiment and subsequent Data Collection Exercise, the MIRACL's successful intercepts, the Theater High Energy Laser and its mobile successor, and the ZEUS laser neutralization system.

In 2001, Lt. Gen. John Costello, the USASMDC commander, observed that "directed energy technology has the potential to be a key component in the Army transformation effort." To enhance these resources, the Command and the Department of the Energy signed an agreement to support an Army Directed Energy Center of Excellence at USASMDC. This new mission was not born by happenstance, the foundation for the agreement was laid three decades earlier.



The proposed space-based neutral particle beam would shoot an unbendable beam of hydrogen molecules at approximately 60,000 kilometers per second to disrupt the electronics and warhead of an incoming missile.

## HELSTF

continued from page 26

Since then the command has continued to offer the MIRACL-SLBD's testing capability to various military and academic programs. Tom Hodge, the current HELSTF director, describes the MIRACL as "the workhorse of military laser research."

As laser test customers developed requirements, the Army and later the command added to the suite of laser test facilities and systems at HELSTF.

The first, constructed in 1988, was the Large Vacuum Chamber. It is a 50-foot diameter sphere shaped chamber that can produce vacuums equivalent to 650,000 feet in altitude. It is the only vacuum chamber

that can expose targets to a high energy laser beam while in a vacuum environment.

On Aug. 22, 1991, the first full scale satellite lethality experiment using a high energy laser was successfully completed with the MIRACL laser. This test verified the effects of high energy lasers on prospective targets, permitting accurate determination of the size and power required for a Directed Energy Anti-Satellite weapon system.

The Pulsed Laser Vulnerability Test System (PLVTS) is another HELSTF asset which has been in operation since 1992. The PLVTS is a pulsed CO<sub>2</sub> laser and beam director that is used to replicate threat tactical laser systems to support vulnerability testing of U.S. military weapons and system

components.

The MIRACL system again performed a world "first" when it successfully tracked, engaged and destroyed a katyusha rocket in flight. This success led to the development of the Tactical High Energy Laser (THEL) that was tested on a variety of air-borne targets from 1999 to 2004. (See "Science Fiction Becomes Reality" on page 20.)

HELSTF has been testing a Solid State Heat Capacity Laser (SSHCL) since August of 2001. The SSHCL device, built by Lawrence Livermore National Laboratory, is the most powerful device of its kind in the world. At 10 kilowatts of power, the SSHCL has only 10 percent of the power it needs to match the destructive power of the THEL. However its small size and all electric operation

offer battlefield mobility that cannot be duplicated by a chemical laser such as the THEL. Researchers are confident that the SSHCL technology can eventually produce the 100 kilowatts required to shoot-down enemy rockets at realistic combat ranges.

HELSTF is modernizing its facilities and infrastructure to keep pace with ever changing military. The location of HELSTF at WSMR provides access to more than 5,000 square miles of highly instrumented land space and 7,000 square miles of controlled airspace for high energy laser testing. The wide array of laser systems, instrumentation, and test facilities currently in use makes HELSTF a unique national asset.

Feb. 9, 1996 ...

# Science fiction becomes reality

By Mark Hubbs  
SMDC/ARSTRAT Historical Office

On this day, the Nautilus program, using the Mid Infrared Advanced Chemical Laser (MIRACL) at the High Energy Laser Systems Test Facility (HELSTF), demonstrated the effectiveness of a Tactical High Energy Laser with an intercept of a katyusha rocket in flight. It was the first time in history that a laser had tracked, engaged and destroyed a rocket in flight and the first step in proving that lasers have a valid potential in missile defense.

The history of the THEL can be traced to the mid-1990s. At that time Israel began to experience attacks from Hezbollah terrorists firing katyusha rockets from southern Lebanon into northern Israel. As a result of this emerging threat, the MIRACL became the center piece of a joint U.S.-Israel project to test the concept of using a high power laser to shoot down short range artillery rockets. On Feb. 9, 1996, just nine months after the project was launched, the concept was proven when the MIRACL destroyed a katyusha rocket in flight over White Sands Missile Range, N.M.

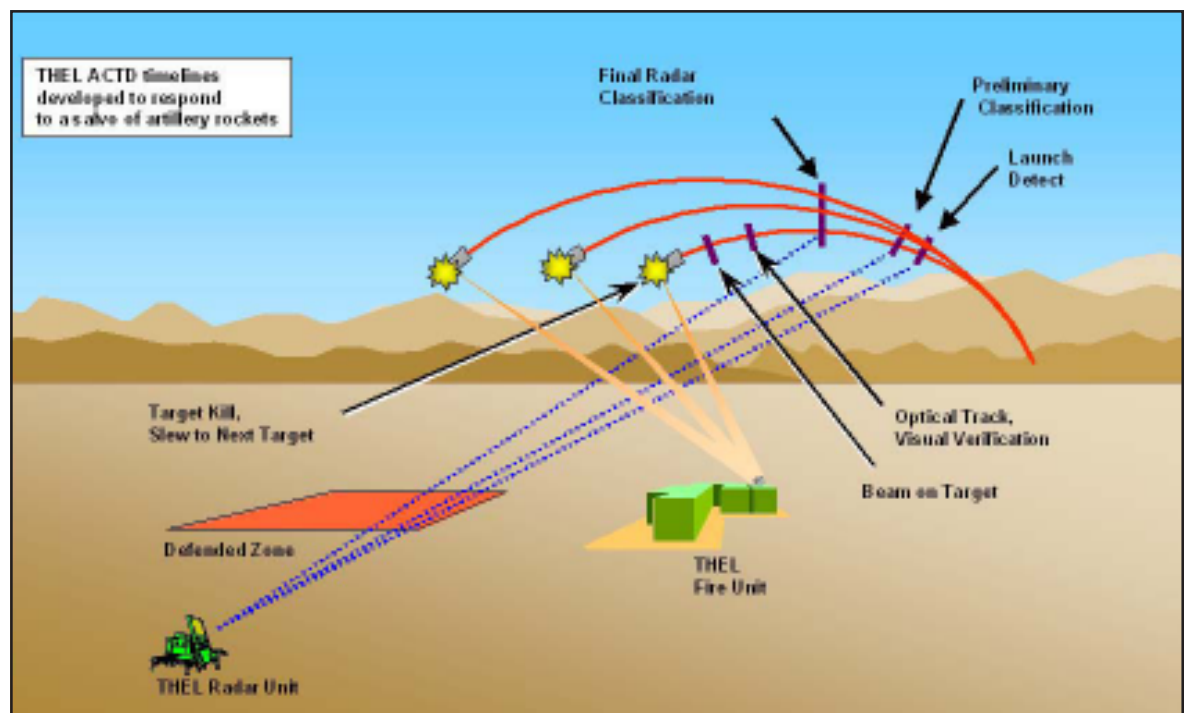
THEL continued building on the anti-rocket concept and technology proven by the MIRACL. Secretary of Defense William Perry elevated the THEL program to an Advanced Concept Technology Demonstration (ACTD) on May 11, 1996. In a memo to the service secretaries, Perry wrote: "This is an urgent matter for both governments and one to which I assign the utmost importance. (Source: *Defense Week*, May 20, 1996.) The United States and the Israel subsequently signed an MOA formalizing the agreement announced previously by the Clinton Administration. The Department of Defense appointed USASMDC as the executive agent for the joint THEL/ACTD program. In July 1996, the command awarded the contract to design, build and test a transportable, tactical sized, demonstrator, including a 100 kilowatt-class deuterium fluoride laser, pointer/tracker, and C3I with organic radar.

After three years of design, prototype construction and environmental analysis, the THEL/ACTD laser achieved "first light" at the TRW facilities in San Juan Capistrano, Calif., in June 1999. The THEL/ACTD was then installed on a remote portion of HELSTF property where all elements of the system were integrated. It began static testing in early



Photos courtesy of U.S. Army

The THEL Pointer Tracker at the High Energy Laser Systems Test Facility at White Sands Missile Range, N.M.



Artist's Concept of an MTHEL Multiple Engagement Scenario

2000 and on its first attempt shot down a katyusha rocket on June 6, 2000. This was the first time in history that a laser system destroyed a rocket in flight. The THEL/ACTD was challenged with a series of increasing difficult single and multiple katyusha engagements. The laser successfully lased and destroyed each of its targets.

In October 2000, the Office of the Secretary of Defense declared the THEL/ACTD successfully completed. Nevertheless the program continued to evolve. The emphasis of testing and research was expanded to include development of a mobile version of the THEL.

On Nov. 5, 2002, the MTHEL made history again when it successfully tracked and intercepted three 152mm artillery projectiles fired from a howitzer, marking the first intercepts by a laser of an artillery projectile. As these projectiles are eight feet shorter, fly faster yet emit less heat than the Katyusha, these intercepts reflect significant advances in directed energy technology. Further tests proved MTHELs capabilities against long range rockets, cruise missiles and mortar projectiles.

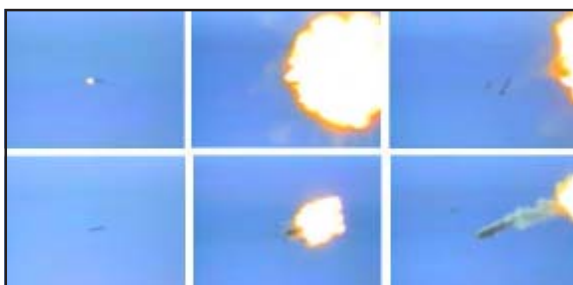
The USASMDC Technical Center had

accomplished its mission of developing, testing and demonstrating the THEL concept. The MTHEL program transitioned from USASMDC to the Program Executive Office Air and Missile Defense's Short Range Air Defense (SHORAD) Project Office in October 2004 for further development. On March 3, 2005, Assistant Secretary of the Army (Acquisition, Logistics and Technology) Claude Bolton announced the termination of the MTHEL and other programs. The MTHEL was redesignated the HEL Block-3 and transferred to HELSTF to support future Solid-State Laser technology development testing. Although the anti-rocket concept was proven by the MTHEL, the Army decided in 2006 to abandon development of tactical chemical lasers to concentrate on more compact solid state lasers.

The THEL accomplished a great deal during its five-year career. It proved that a laser system could detect, track, engage and destroy a target traveling as fast as 1,000 miles per hour and one as small as five inches in diameter. In a remarkable record, the THEL downed 28 katyushas, five 152mm artillery projectiles, two long range rockets, two Air Force Roadrunner missiles and seven medium sized mortar projectiles.

**'We've just turned  
science fiction into  
reality.'**

— Lt. Gen. John Costello



Multiple targets destroyed in flight at White Sands Missile Range, N.M., by THEL.