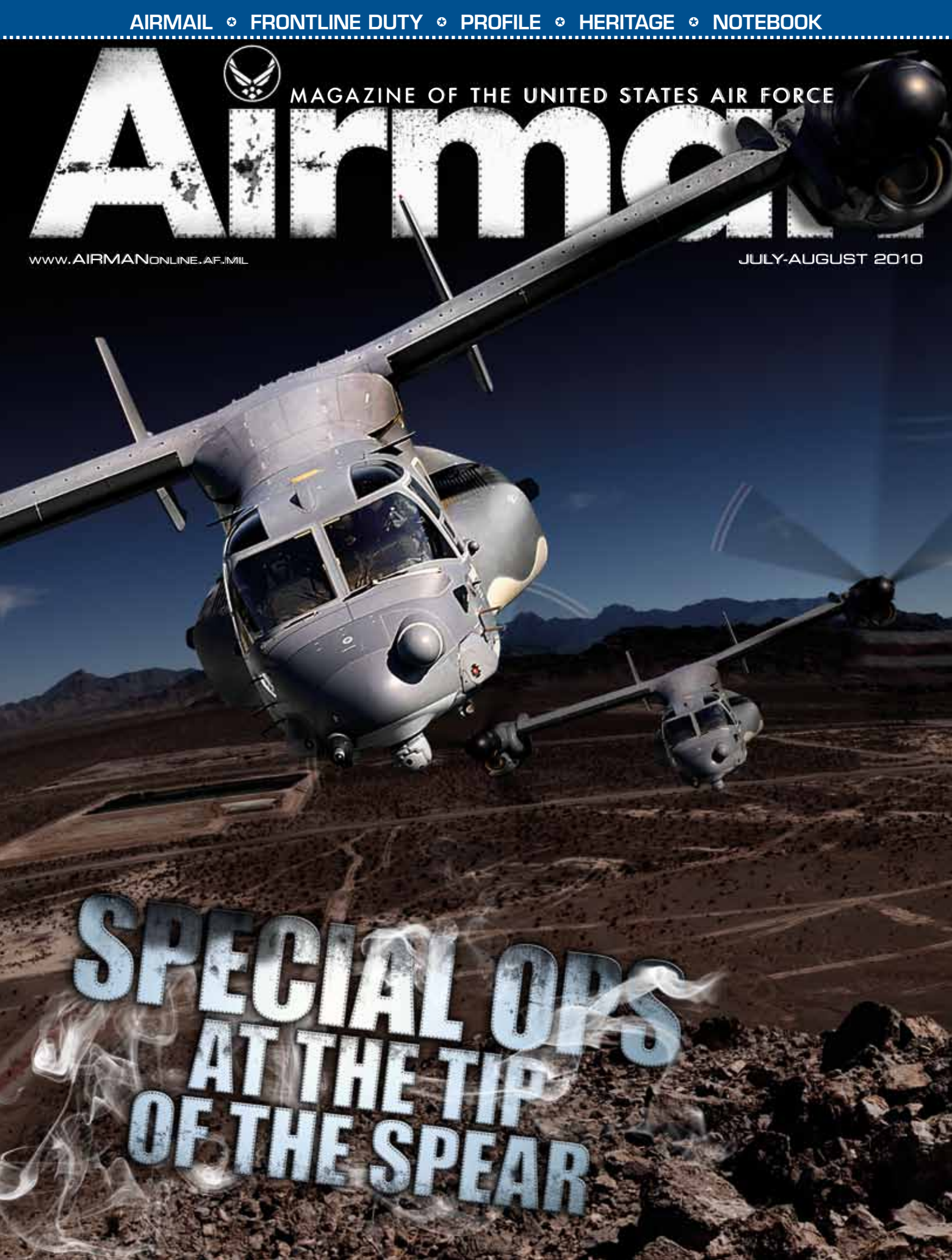
MAGAZINE OF THE UNITED STATES AIR FORCE

Airman

www.AIRMANonline.af.mil

JULY-AUGUST 2010

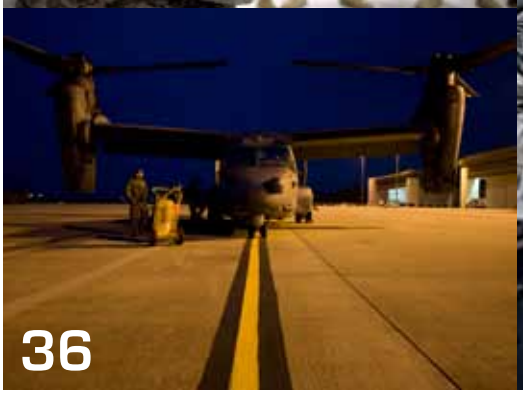


SPECIAL OPS AT THE TIP OF THE SPEAR


Freedom is never free
JULY 4, 2010
INDEPENDENCE DAY
design by: Nick Medrano
Airman

Airman CONTENTS

JULY-AUGUST 2010



Features

Departments

On the Cover

Air Force Special Operations CV-22 Osprey can perform missions that normally require both fixed-wing and rotary-wing aircraft. See page 36 for a story about the challenges of life as an Osprey crewmember.

illustration and design by G. Patrick Harris

COMMENTS

Got something to say about Airman? Write us at **airman@dma.mil,** or visit **www.AIRMANonline.af.mil,** to share views with fellow readers.

THE BOOK 2010

Thank you for publishing The Book. It provides great information that is useful to our Air and Space Basic Course students, who are newly-commissioned second lieutenants. During ASBC, students plan and execute air operations using a constructive multi-player simulation.

I wanted to comment specifically on the Bombs and Missiles aerial weaponry pages and provide a suggestion or two. The illustrations help our students visualize these weapons for recognition when these weapons are actually seen loaded on aircraft. When ASBC students participate in exercises, they have to make employment decisions using these specific weapons.

Weaponry data that seem fairly useless are the measurement dimensions provided for each weapon. The size of the weapon in feet and inches has very little bearing on their use in combat. So, future planners or operators derive very little from reading those dimensions. I recommend you delete the dimensions next year and focus on more useful information.

Weapon ranges for the various bombs and missiles are extremely useful so thanks for providing whatever unclassified, releasable numbers you can for these.

Most of the bombs are shown with total overall weights, which is useful information for comparing bomb classes. One weight that would be very useful for air planners would be warhead weight and type. This is commonly-available data you should be able to find through unclassified sources.

Keep up the great work. The Book is a great reference. We hope you will continue to improve and enhance it so it becomes even more valuable for Airmen.

Lt. Col. Gary C. "Mo" Morgan
USAF Retired
Simulation Engineer, Squadron Officer College (SOC/DET)

MARCH-APRIL ISSUE

In the story about Sagamore Hill, ["Space Weathermen" March- April 2010] you refer to a solar observatory in Learmonth, Australia. The site is called Learmonth Solar Observatory and is located 22 miles south of Exmouth, Australia which is approximately 2,500 miles from Learmonth.

Thank you,
Tech. Sgt. Paul Loe
Learmonth Solar Observatory

I have subscribed to Airman since I retired and enjoy it immensely. Some years ago, the enclosed poster was a beautiful poster of the Air Force core values. I would encourage you to once again publish a poster of our core values for inclusion in some future issue. Thanks, and keep up the great magazine!

Chief Master Sgt. Cliff Wagner
USAF Retired
Peoria, Ariz.

MAY-JUNE: HAITI

From the very first issue of this fine publication that I was fortunate enough to read when I joined the Air Force 12 years ago, I have seen wonderful creativity, great photojournalism and intriguing articles in each and every issue. The May-June 2010 issue has now raised the bar another notch or two! The format is exciting, eye appealing and worthy of anybody's coffee table. I know I will take a copy home and proudly display it just there — proudly letting everyone who visits our home know that I'm part of an amazing organization.

More importantly, the content in the articles in the new issue is touching and heart-warming, to say the least.

Thank you for yet another reason I'm proud to be in the Air Force!

Lori L. Everett, Lt. Col, USAF, DC
Support Flight Commander
56th Dental Squadron
Luke AFB, Ariz.

Sweet! Go Air Force!

Remeet Singh
Reprinted from the Airman magazine fan page on Facebook

As one who served in OUR, thank you for this special edition! Great job as always, Airman Magazine!!!

Amber Gailey Cargile
Reprinted from the Airman magazine fan page on Facebook

Agreed, great issue, but for one thing. I was a little disappointed in the coverage in this issue. I was one of 39 firefighters who were on the ground in Haiti from start to finish. There isn't one single mention of any of the work that we did. Not one.

Thomas Sidoti
Reprinted from the Airman magazine fan page on Facebook

Editor's Note: *Thomas, we can't cover it all and sometimes we miss some great stories. However, we do have a firefighter story in the July-August issue. We welcome story ideas, so send us a heads-up to airman@dma.mil. Tell us about the stories you want to see in Airman.*

This has to be the best issue yet!

Jonathan Snyder
Reprinted from the Airman magazine fan page on Facebook

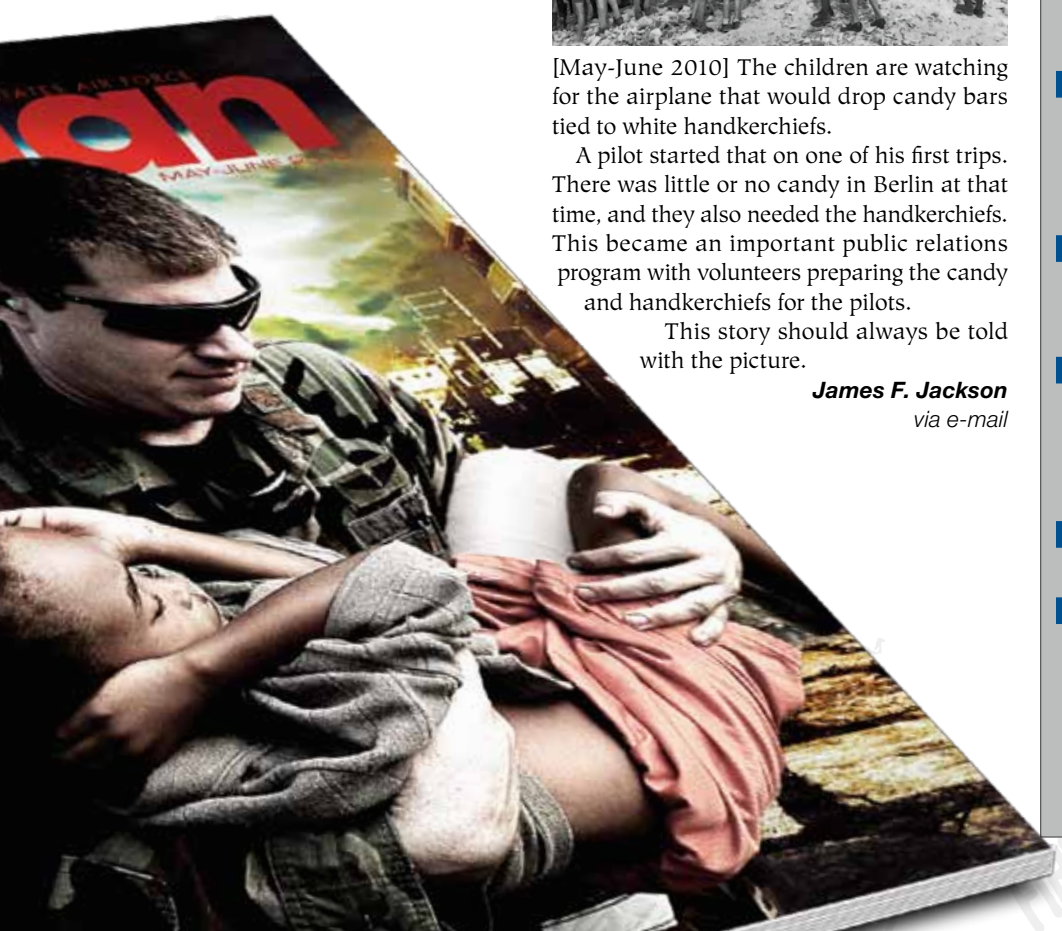
CANDY BOMBER

[May-June 2010] The children are watching for the airplane that would drop candy bars tied to white handkerchiefs.

A pilot started that on one of his first trips. There was little or no candy in Berlin at that time, and they also needed the handkerchiefs. This became an important public relations program with volunteers preparing the candy and handkerchiefs for the pilots.

This story should always be told with the picture.

James F. Jackson
via e-mail



Airman

Official magazine of the U.S. Air Force
July-August 2010, Volume LIV, Number 5

Secretary of the Air Force	**Michael B. Donley**
U.S. Air Force Chief of Staff	**Gen. Norton Schwartz**
Director of Air Force Public Affairs	**Col. Les Kodlick**
Commander DMA - San Antonio	**Col. Clifton Douglas Jr.**
Deputy for Public Affairs Operation	**Jeffrey L. Whitted**
Chief, Print and Web	**Dick Hodgson**

AIRMAN STAFF

Editor in Chief	**James B. Pritchett**
Managing Editor	**Collen McGee**
Associate Editor	**Randy Roughton**
Senior Staff Writer	**Staff Sgt. J. Paul Croxon**

DESIGN STAFF

Design Director	**G. Patrick Harris**
Deputy Design Director	**Luke Borland**
Production Manager	**Andrew Yacenda**

CONTRIBUTORS

Copy Editor	**Steve Richards**
Copy Editor	**Janie Santos**
Contributing Writer	**Tech. Sgt. Matthew McGovern**

PHOTOJOURNALISM

Chief, Photo	**Master Sgt. Jack Braden**
Photojournalist	**Lance Cheung**
Photojournalist	**Staff Sgt. Bennie Davis**
Photojournalist	**Staff Sgt. Desiree Palacios**

ABOUT AIRMAN

Airman is published bimonthly by the Defense Media Activity for the Secretary of the Air Force Office of Public Affairs. As the official magazine of the U.S. Air Force, it is a medium of information for Air Force personnel. Readers may submit articles, photographs and artwork. Suggestions and criticisms are welcome. All pictures are U.S. Air Force photos unless otherwise identified. The opinions of contributors are not necessarily those of the Air Force.

EDITORIAL OFFICE

Airman, DMA-San Antonio, 203 Norton St., San Antonio, TX 78226-1848
Telephone 210-925-7757; DSN 945-7757, fax 210-925-7219; DSN 945-7219
E-mail: airman@dma.mil

LOOK US UP

www.AIRMANonline.af.mil
For more news see the Air Force's official World Wide Web home page at www.af.mil

FOR A UNIT SUBSCRIPTION

Administrative support offices can send the unit's mailing address and the total number of military and civilian Air Force people assigned via e-mail to distro.airman@dma.mil to start receiving copies on a regular basis.

DISTRIBUTION

One copy for every three Airmen and civilian workers.

FOR A PERSONAL SUBSCRIPTION

Call toll free 1-866-512-1800; or fax 202-512-2250 for subscription cost. Pay-by-phone orders are processed from 8 a.m.-4 p.m. Eastern time. For information, write: Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954

Frontline Duty

AROUND THE AIR FORCE IN PICTURES

The staff at Airman hopes you enjoy these images of what's happening around the Air Force today. All of the images for this section come to us from photographers in the field and Airmen on the job at locations around the world.

Airmen can be found flying high, landing on dirt runways or dangling from a harness as they practice rescue moves that might save someone from the face of a cliff or a mountain of rubble after a disaster. You'll see Airmen ready to take on a raging forest fire or training to be in the line of fire. Others will haul rockets in the cargo bay of a C-17 Globemaster III or are experts at loading missiles onto fighter aircraft. Whatever they do, today's Airmen do it with a level of skill and dedication sure to inspire us all as we get this opportunity to see inside their day.

Airman magazine welcomes your photos and comments. You can email your images to airman@dma.mil. We also invite you to join our facebook community at www.facebook.com/AirmanMagazine.

— Airman Staff

AN HC-130 Hercules, with the 39th Rescue Squadron, Patrick Air Force Base, Fla., gets a quick brown-out from the rotor wash of an HH-60 Pave Hawk on a dirt air strip in the desert surrounding Davis-Monthan AFB, Ariz., during Angel Thunder 10, an Air Combat Command-sponsored exercise. It is the largest personnel recovery/ combat search and rescue exercise to date, combining Department of Defense and civilian assets.

photo by Staff Sgt. Joshua L. DeMotts

Tech. Sgt. Tom Simmonds manipulates a Stokes litter while performing a simulated highline rescue during firefighter training at the Louis F. Garland Fire Training Academy at Goodfellow Air Force Base, Texas.

photo by Tech. Sgt. Sean M. Worrell

A C-17 Globemaster III taxis across the main ramp at an undisclosed location in Southwest Asia. The aircraft can perform tactical airlift and airdrop missions and can also transport litters and ambulatory patients during aeromedical evacuations. The C-17 began operations in 1993.

photo by Tech. Sgt. Daniel H. Canedo

An HH-60 Pave Hawk and crew "rescues" three members from the 909th Air Refueling Squadron after a simulated KC-135 crash at Kadena Air Base, Japan. The aircraft is assigned to the 33rd Rescue Squadron at Kadena. The training was part of a local operational readiness exercise to test the readiness of Kadena Airmen.

Tech Sgt. Joel Meyer, front, and Staff Sgt. Derek Walton practice room-clearing tactics during a security exercise. Both are with the 28th Security Forces Squadron at Ellsworth Air Force Base, S.D.

photo by Senior Airman Amanda N. Grabiec

Airmen from the 820th Security Forces Group at Moody Air Force Base, Ga., wait to board an aircraft for a training mission that will include a static-line parachute jump.

photo by Airman 1st Class Joshua J. Seybert

photo by Staff Sgt. Andy M. Kin

photo by Staff Sgt. Christopher Boltz

An F-16 Fighting Falcon Aggressor soars over the mountains during RED FLAG-Alaska 10-2, at Eielson Air Force Base. RF-A provides participants 67,000 square miles of airspace, more than 30 threat simulators, one conventional bombing range and two tactical bombing ranges containing more than 400 different types of targets. The F-16 is assigned to the 18th Aggressor Squadron.

Louisiana Air National Guardsman Master Sgt. Troy Fontenot, a crew chief with the 159th Fighter Wing's Aircraft Maintenance Squadron, inspects aileron movement on an F-15C Eagle during an operational readiness inspection at Naval Air Station - Joint Reserve Base New Orleans, La.

A jumbo drop test vehicle is loaded onto a C-17 Globemaster III. The JDTV was dropped over the Army's Yuma Proving Ground, Ariz., to test the deceleration and recovery parachutes. The 77,000-pound JDTV set a record for heaviest single load ever extracted from a C-17 during flight.

Staff Sgt. Coel Lewis ensures that a fin is properly installed on an Air Intercept Missile-120 before loading it on an F-15 Eagle at Elmendorf Air Force Base, Alaska. Sergeant Lewis is an aircraft armament specialist with the 19th Aircraft Maintenance Unit.

photo by SSgt Jeffrey T Barone

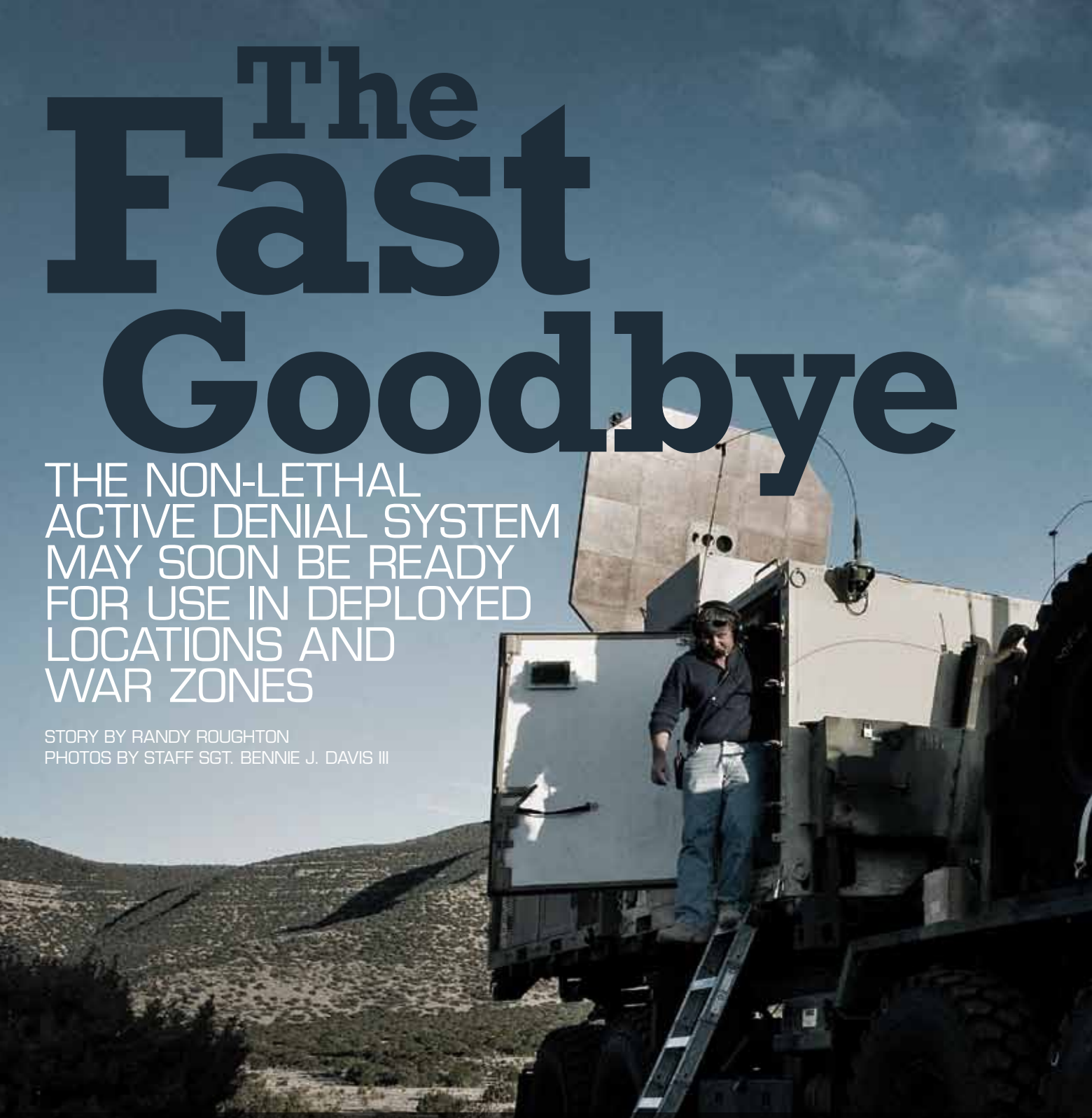
NASA courtesy photo

photo by Senior Airman Cynthia Spalding

The Fast Goodbye

THE NON-LETHAL ACTIVE DENIAL SYSTEM MAY SOON BE READY FOR USE IN DEPLOYED LOCATIONS AND WAR ZONES

STORY BY RANDY ROUGHTON
PHOTOS BY STAFF SGT. BENNIE J. DAVIS III



An angry crowd surrounds a downed UH-60 Blackhawk crew in a remote province in Afghanistan. An AC-130U Spooky flies directly above the scene, but crewmembers above can't distinguish between civilians and potentially deadly adversaries on the ground. Fortunately, in this fictional scenario, there's a new weapon on board the aircraft, one with a non-lethal beam, in addition to the platform's standard, live ammunition. Within seconds, the non-lethal weapon can disperse the crowd and clear the way for the crew's rescue.

The Active Denial System's non-lethal technology uses invisible beams of millimeter-wave electromagnetic energy to repel potential combatants. It works from a range beyond small arms fire on the smaller ground systems and from the air on platforms such as the C-130. Within seconds, the beam produces what some researchers call "the goodbye effect." The phrase refers to what a person hit with the ADS feels within seconds of the heat warming his skin – an urgent desire to leave quickly and get out of the beam's path. The ground-based versions of the ADS could soon be available in deployed locations like Afghanistan and Iraq. In the past 15 years, more than 700 people have voluntarily taken hits from the

Research Physicist Bill McClough steps out of the Active Denial System 2 at the Air Force Laboratory's ADS test range. There are three ADS units in the Advanced Concept Technology Demonstration program. The ADS 2 is the newest prototype and is designed to operate in higher temperature environments and can be used at a fixed site or on the back of a tactical truck.

(Top) Research Physicist Bill McClough operates the Active Denial System 2 at the Air Force Laboratory's ADS testing range.

(Below left) Jim Staggs operates the Active Denial Technology Hardware Demonstrator ADS during controlled testing. The joystick allows Staggs to accurately target the ADS's focused millimeter wave beam that travels at the speed of light. Staggs is the lead system engineer for the ADS weapon.

(Below Right) First Lt. Nathaniel Sorensen, a research physicist, volunteered to be zapped during tests. Lieutenant Sorensen is one of many volunteers to step in front of the Air Force's "pain ray."

directed-energy weapon in demonstrations to help prove its effectiveness and safety in a 21st century war zone. Now, it's up to the individual services to decide if they want to use the ADS and how to fund it.

An Air Force Research Laboratory quantum optics physicist volunteered to take an ADS strike several times. First Lt. Nathaniel T. Sorensen felt the chill of the early winter 30-degree mountain air at Kirtland Air Force Base, N.M. He waited in his short-sleeve blue uniform for the beam to hit his skin. Within two seconds the cold left Lieutenant Sorensen's mind.

This wasn't his first time as a test subject for the ADS. He also volunteered for an experiment last summer when the heat brought out an army of gnats that competed with his focus on the mission. That experiment was designed to monitor skin temperature responses to the ADS beam with an infrared camera. His job was to remain as still as possible while standing shirtless and waiting for the beam. The annoying gnats made standing still a challenge. But, the gnats quickly lost importance when the beam was trained on his skin.

"The gnats were all around me," he said. "I tried to make the best of it and pay attention. (I was) trying to count how long I could stay in the beam, or wondering if the ADS affected insects at all; anything to get my mind off the gnats in my ears. No matter how hard I tried to concentrate, as soon as the beam turned on, I couldn't pay attention to anything else at all. It opens up hot like an oven, but unlike one blast of hot air, it doesn't stop. It just keeps coming. When you have gnats flying into your ears and you don't care, you know it works."

Officials at the research laboratory say the technology can be used for peacekeeping, area denial and riot control from above and potentially aboard a variety of aircraft in the field, while the Army may use the system on mine-resistant ambush protected vehicles. The ground-based ADS range is about 10 times greater than any other nonlethal weapon. AFRL experts expect the system will be ready for field use within two years, but the transition into the DoD inventory can't happen until the ADS completes the acquisition process and becomes a "program of record," said Dr. Diana Loree, ADS program director.

"If a program of record is started, then demonstration systems could be fielded in less than two years," she said.

The ADS could give troops and commanders a tool allowing them time to determine the enemy's intent and reduce the enemy's immediate ability to cause harm. Loree explained that the temporary pain caused by ADS could encourage an aggressor to withdraw long enough to give that troop and

commander more time to make decisions without killing or wounding anyone.

Besides saving lives and buying time, it would be a huge benefit in controlling collateral damage. Loree said ADS would be very useful in repelling individuals or crowds in a specifically targeted area. That capability could add a layer of defense at entry control points, crowded villages and, if mounted on an aircraft, it could buy time for a unit if they are boxed-in or pinned down.

Staff Sgt. Adam Navin was a role player when the 820th Security Forces Group evaluated the system at Moody Air Force Base, Ga. The Airmen tested it in scenarios like securing base perimeters, inspecting suspicious vehicles, securing checkpoints and entry control points and monitoring large gatherings with the potential of violence.

He saw it as an especially effective weapon at entry control points and with large crowds. The system gave entry controllers what Sergeant Navin calls "a tight and focused beam" that allowed them to disperse a crowd of role players.

"One of the most complicated things to handle as an entry controller at a deployed location is getting the number of individuals who congest at your gate to step away or to get that same angry group to back away," Sergeant Navin said. "If this was in place, we could easily drive back those individuals while we kept the Airmen on the frontline, covered in a safe position until they had the situation handled."

The sergeant is a security forces apprentice course instructor with the 343rd Training Squadron at Lackland Air Force Base, Texas, and served two tours in Iraq. His observations of the ADS in action, not to mention feeling its effects firsthand, convinced him the system could be useful in Afghanistan or Iraq.

The option of taking control of a potentially violent situation without firing a lethal weapon could be a major advantage from Navin's perspective. He talked to several Airmen who employed the ADS in the training scenarios at Moody and said they felt no mixed emotions because, unlike a Taser or pepper spray, they knew the effects weren't permanent. It would just make people uncomfortable enough to move or back away.

"The value of this weapon cannot be measured," Sergeant Navin said. "In the instances where we use less than lethal force, the range and capabilities that this machine possesses far outweigh any of the current tools. Unlike a weapon that injures a person when you shoot it, this affords the users the ability to deter the threat by pure discomfort.

"Since the effects aren't lasting and it ensures limited collateral damage, the controller's mind is placed at a more sensible place of ease."

Captain Katrina Schweiker maneuvers the antenna on test system 1 of the Active Denial System, a humvee mounted version at the Air Force Research Laboratory at Kirtland Air Force Base, N.M. ADS is a counter-personnel, non-lethal, directed-energy weapon. The ADS focuses beams of millimeter waves that induce the sensation of intolerable heat on an adversary's skin. When the enemy steps away, the skin returns to normal temperature. The enemy is repelled without permanent injury.

The ADS is the most heavily reviewed non-lethal weapon in DoD history. The Air Force Research Laboratory at Kirtland and the Human Effectiveness Directorate at Brooks City Base, Texas, have spent more than $50 million, on top of the millions spent by the INLWD, to ensure the ADS is effective and safe. Research has shown millimeter waves don't cause cancer or reproductive problems. Two injuries occurred in more than 11,000 ADS strikes on volunteers in the testing process. Both injuries, in 1999 and 2007, resulted in second-degree burns and were attributed to procedural errors that were corrected by hardware, software and training improvements, Loree said. The standard adverse reactions – skin blisters and reddening – are extremely rare and usually temporary.

"We've been testing for 15 years to make sure the system is just heat and doesn't cause eye or skin damage, cancer or affect reproduction," Loree said. "We want to make sure we know its effects. We're now at the point of aiding warfighters in making decisions on how to use the system, to assess the benefits of its capability versus its cost."

An energy beam from the system's millimeter waves can only penetrate 1/64 of an inch, where nerve endings are located. This is the equivalent to the thickness of three sheets of notebook paper. Microwaves can penetrate through several inches of skin. But within seconds, the ADS beam tricks the person's senses into thinking he's on fire. The system uses a transmitter to send a narrow, invisible beam of energy at the speed of light toward the subject. The beam penetrates the skin and quickly heats the surface. Within seconds, the individual feels intense heat that volunteers compare to touching a hot light bulb or a blast of hot air from an oven. However, unlike the physical effect of touching a hot bulb, there's no burning.

Capt. Brian Anderson, a 37th Aerospace Dental Squadron flight surgeon, served as a medical monitor for more than 100 of the volunteer ADS subjects. He's also seen the system's reliability and effectiveness from the perspective of a medic and a volunteer.

"I've participated as a volunteer, and you get out of that beam within a second," he said. "It's completely safe, but it's painful and also a complete deterrent."

Most non-lethal weapons in the DoD inventory use kinetic energy, which has a higher injury risk and their effectiveness varies when applied to people of different ages, genders and sizes, along with drastic variations in target distance. The ADS is consistently effective, no matter how old or big they are and there's less variation of effects with range.

"The electrically-powered beam can basically control an area causing suppression of activity, and, if necessary, discrete targeting and repelling of adversaries, even if they are in close contact with operational forces or bystanders," Loree said.

Loree explained that the system's best use is in making it impossible for an enemy, be it one or a group, to aim a weapon, or even too painful to stay in the area long enough to coordinate an attack.

Many of the 700 people who volunteered to be struck by an ADS beam are believers in its ability to make someone move.

"I am definitely of the opinion that the Active Denial System, which could make me forget about everything but the instinct to move now, even with the gnats in my ears, is an excellent device," said Lieutenant Sorensen. "There's no perfect description for something like that unless you've been shot with it. There's nothing else like it."

INFORMATION FOR CRUISING THE SOCIAL MEDIA WORLD, AT HOME AND WORK

STORY BY COLLEN MCGEE

Airmen across the force can now change their facebook status, check out the latest videos on YouTube™, keep in touch with family back home or comment on a blog using their government computers.

Following the direction of the Department of Defense, Air Force communications specialists recently began opening Web-based social networking sites on non-classified computer systems.

The Air Force is implementing the DoD directive in phases, both in site accessibility and geographically by major command. Pacific Air Force bases were the first to gain access in May and commands across the United States soon followed. Sites like YouTube, Flickr, Facebook, Twitter and Google Apps were the first of 30 made available. Other networking sites and Web-based e-mail will follow until the directive is met.

What that means to Airmen is that there is now a range of Internet-based communication tools available. It also means that those tools come with rules.

"THE AIR FORCE VIEWS THE USE OF SOCIAL MEDIA SITES AS A POSITIVE WAY TO COMMUNICATE AND CONDUCT BUSINESS."

— Gen. C. Robert Kehler

"Similar to the installation of the telephone on our desks decades ago, and more recently even e-mail, we have rule sets that govern their use," said Capt. Christina Hoggatt, a public affairs officer at Air Force Space Command.

Operational security is not a new concept for Airmen, and OPSEC applies to all the tools used for communicating, from face-to-face conversations to the hottest pieces of emerging technology to hit the commercial market.

"The same rules of engagement apply whether you're using your home computer or an Air Force asset," said Paul Bove, a social media strategist with the Air Force Public Affairs Agency. "Airmen should still practice OPSEC and common sense. Don't post information that could potentially embarrass you or the Air Force."

Bove said that if there is a question beyond that governed by current operational security measures, run it by the public affairs office.

Though there is a risk associated with opening social-networking sites to Air Force computer users, officials at Air Force Space Command believe the benefits outweigh those risks.

"The Air Force views the use of social media sites as a positive way to communicate and conduct business," said Gen. C. Robert Kehler, commander, Air Force Space Command. "Social media and other emerging technologies provide an increasingly important means of communication and collaboration. Providing more open access will allow the Air Force to communicate more effectively to all Air Force personnel, their families and external audiences."

Not only will the open access policy help Airmen tell the Air Force story, it will let them tell it from a personal view. Opening those sites also allows Airmen to share links to official information through social-networking sites they are already comfortable using.

"Every Airman has a story to tell and access to the sites will continually help tell the Air Force story," Captain Hoggatt said.

Air Force leadership and communicators are actively engaged in using social media to keep Airmen aware of news as it happens. Up-to-date official Air Force information is widely available through Facebook, Twitter and Flickr.

Captain Hoggatt said the limits of these capabilities are only bound by the limits of creativity in the people using them. For example, if a photo is too large to send via e-mail, it can be uploaded to a site like Flickr. Additionally, links to official, unclassified sites and Air Force news products can gain more exposure when shared via Facebook and YouTube.

Another benefit to opening access on Air Force computers is the ability to see what people are saying about your organization. Bove stressed how important that is.

"Online reputation management is vital, and open networks will allow people to read, or see, what is being said and provide responses as necessary," he said.

Airmen are encouraged to engage others on the web and give their opinions based on their own experiences. It is also each Airman's responsibility to make sure their personal opinions are not represented as the official position of the Air Force.

Air Force officials published a social media guidebook in 2009 to help Airmen navigate on social-networking sites. The guidebook not only helps Airmen apply OPSEC, and use the emerging tools, but it encourages them to, "talk about the topics within their areas of expertise, or their interests." The guide is available at: www.af.mil/socialmedia.asp.

Top 10 Tips for Social Media

1. **Don't give classified info**
   Don't divulge classified, FOUO or sensitive materials, photos or video. OPSEC is crucial to the mission, think before you speak or film.
2. **Stay in your lane**
   If you're an aircraft mechanic, you're well suited to communicate messages about aircraft maintenance. If you're an aircraft mechanic discussing legal issues—reconsider your post.
3. **Don't lie**
   Credibility is critical, without it, no one cares what you have to say...it's also punishable by the UCMJ to give a false statement.
4. **Give your opinion**
   Tell them what YOU think...just make sure you state that this is your opinion and not that of the organization. Also, be sure to identify what is your opinion and what is factual.
5. **Always identify yourself**
   Identification makes your post more credible.
6. **Safety**
   Don't let the desire to get your message across compromise your consideration for safety.
7. **Be aware of the image you present**
   If using a visual medium, don't let your message get overshadowed because the viewer's attention is drawn to your improperly worn uniform or something occurring in the background.
8. **Use common sense**
   This is the bottom line. If you wouldn't say it in front of your mother, you probably shouldn't say it on YouTube. Realize that your words and images will go out to possibly millions of people instantly and once it's out there, it's out there for good.
9. **Don't be afraid to take calculated risks**
   Military life often deals in ambiguity: In order to make the best decision, it's recommended to take in as many variables as possible in order to make the most accurate decision.
10. **The enemy is engaged**
    The enemy is engaged in this battlespace and you must engage there as well.

For more information, view the guide at: **www.af.mil/shared/media/document/AFD-091210-043.pdf**

Source: Air Force Public Affairs Agency

FIRED UP

BY TECH. SGT. MATTHEW MCGOVERN ✪ PHOTOS BY STAFF SGT. DESIREE N. PALACIOS

Senior Airman Jessica Morehouse sprints as she competes in a team relay event. Her speed helps in competition and as a first responder to accidents on a seven-mile stretch of Interstate 25 that runs across the Academy's property and its eastern border.

Senior Airman Jessica Morehouse dons her war paint before suiting up. That's what she calls her eyeliner, mascara and lipstick. Those things may not fit the image of a world-record-holding, rugged firefighter competing in the World Firefighter Combat Challenge, but her competition knows better than to be fooled by the well-kept exterior.

Before each competition, she prepares in a warm-up area shared by firefighters from around the world who size up their competition as they stretch, jump rope, ride stationary bicycles and rouse their teams before walking out on the course. Airman Morehouse and her U.S. Air Force Academy teammates put on their pink, "Fembot" team helmets. They're ready to go.

"I was so excited," said Airman Morehouse. "It was a clean, seamless run and everything went right for us."

Her closest competitors were 18 seconds behind her U.S. Air Force Academy's top-ranked female tandem team in November's challenge at Las Vegas. The Academy has five female members, recruited from military and civilian departments in the Colorado Springs, Colo., area, competing in five events simulating real, on-the-job situations.

Beneath the lights of the old Las Vegas Strip, Airman Morehouse's relay team, "Old Dog, New Trick," beat its own record with a time of 1:52.33.

"I try to get in a zone and I mentally go through what I am about to do in my head," she said. "I'll listen to rock or something loud to get me pumped up."

Airman Morehouse, a firefighter for two years, said she is also motivated by the coaching and experience of Stacey Billapando, a 20-year veteran firefighter and teammate from the Colorado Springs, Colo., Fire Department. The two broke their own tandem world record, one they set the first day of the Las Vegas event.

"THE TIME TO FIND OUT YOU CAN'T GET THE JOB DONE IS NOT WHEN THE FIRE HAPPENS"

— Paul Davis

"We're getting faster every competition and this is the best shape all of us have been in," said Billapando. "These women are animals. You can see the focus in their eyes and Airman Morehouse is truly a natural; her work ethic is unbelievable."

That ability and focus was evident during the obstacle course competition. The course included a five-story tower climb, hoist and chop stations, dragging hoses and rescuing a life-sized 175-pound "victim." The Fembots raced against themselves, their opponents and the clock. To make the event more realistic, participants wore full bunker gear, including an air-breathing apparatus, throughout the competition.

Between competitions, they train in their gear using similar equipment. They even practice with a five-story tower and 175-pound dummy. Cardiovascular endurance and strength are important commodities for fighting fires and World Firefighter Combat Challenge competitive events.

"We practice about two to three times a week and hit the gym almost every day," she said. "Some days I practice my half of the tandem and others I just focus on my dummy pickups and drags."

The training focus pays off. Fire chiefs only send the best for competition. More than 3,000 military and civilian firefighters, hailing from countries such as New Zealand, Germany, Argentina, Chile and South Africa come to Vegas. During the five-day event, the firefighters, from 600 fire departments, also share on-the-job experiences, and their likes and dislikes of the job.

Senior Airman Jessica Morehouse pulls a 175-pound dummy during her part of the relay event.

(Inset) The team calls themselves "the Fembots", and use bright pink helmets as vivid identifiers.

"I think it's incredible how far all the competitors come to compete," said Airman Morehouse. "It's definitely awesome to see all the different people and chat with them about where they're from."

For Airman Morehouse, this event is the ultimate networking experience. Though it's early in her career and she may not have as many on-the-job stories as her coworkers, her love for the job is already strong.

"I have always wanted to be a firefighter and always loved helping people," she said. "I have been on car accident scenes, lots of medical emergencies to the Academy, a few small dumpster fires and just a couple weeks ago, a large hazardous material spill at the hospital."

So far she hasn't had to respond to any major fire emergencies at the Academy. She credits safety awareness for that. These competitions and the training for them keeps firefighters ready for the job.

"The time to find out you can't get the job done is not when the fire happens," said Paul Davis, founder of the World Firefighter Combat Challenge. "What we have here is the best way to get a sense of where you are physically, relative to where you need to be. In that sense, this competition is quite diagnostic. This is a competition with a purpose."

This year marked the 18th anniversary of the challenge, and the competitiveness of Airman Morehouse and other Air Force firefighters has gained Davis' attention.

"The Air Force has become a real powerhouse," Davis said. "It wasn't always that way and it's really quite refreshing to see our military playing a very big role in this. The Air Force out here at the top of the heap speaks volumes about the importance that the Air Force places on things."

Airman Morehouse and her Academy teammates share the credit for that impression by setting records in firefighting competitions. Billapando and Airman Morehouse first broke the womens' tandem world record at the firefighter challenge regionals in Omaha, Neb., with a time of 2:06.22. Their next closest competitors clocked in at 3 minutes and 16 seconds.

A week later, at the nationals in Arlington, Texas, the two set another world record with a time of 2:00.78. They finished 40 seconds ahead of the closest competitors.

"They're awesome and they just put their team together this year," said Anthony McMurtry, an Academy men's team member and world record holder in the tandem competition.

Airman Morehouse said she has become good friends with the Academy team and looks forward to when she dons her war paint for the next challenge.

Senior Airman Jessica Morehouse hugs her teammate, Stacy Billapando, after they completed the team relay event. Billapando is from the Colorado Springs, Colo., Fire Department and has been a firefigher for 20 years.

FIREFIGHTER

Senior Airman Jessica Morehouse

photo by Rachel Boettcher

"I love firefighting because you get to help people. That's one of the things I wanted to do, no matter what career field I chose, and this one seemed to be the best job where I'd be outside doing stuff — not a desk job — a fun job where I can help people."

HOME UNIT/BASE:
10TH CIVIL ENGINEER SQUADRON,
U.S. AIR FORCE ACADEMY, COLO.

HOMETOWN:
WALLOWA, ORE.

ENTERED AIR FORCE:
AUGUST 2007

PRIMARY AFSC:
3E751 FIRE PROTECTION

Tech. Sgt. Levi Soule, a 319th Missile Squadron missile alert facility manager, levels some of the alert facility perimeter with a JCB 416HT high terrain front loader.

MAN OF THE HOUSE

THE MISSILE ALERT FACILITY MANAGER

STORY BY STAFF SGT. MARESHAH HAYNES

Security forces members and missile alert facility chefs deploy to the missile field for days. While away from home, they live in a building that resembles a ranch-style house out on the prairie. The house is complete with bedrooms, kitchen, lounge and a mini gym. It also houses a water treatment room and a large generator.

The person who keeps all of it running smoothly is the facility manager. There are many facility managers in the Air Force, but few reside above a capsule that controls LGM-30G Minuteman III intercontinental ballistic missiles.

The missile alert facility manager is responsible for the upkeep and maintenance of the facility inside and out. A total of 15 MAF managers report to F.E. Warren Air Force Base, Wyo.

(Above) Tech. Sgt. Levi Soule, a facility manager with the 319th Missile Squadron, maintains the grounds, the building and everything inside.

(Right) Tech. Sgt. Thomas Barnello had to master several new skills, including running heavy equipment, when he volunteered to leave his munitions career field for four years as a facility manager.

(Far Right) Tech. Sgt. Thomas Barnello said he enjoys the challenges of this special duty. Unlike the full-time job he's doing now, most Air Force facility management is an additional duty. He hasn't decided if he will retire or return to work in munitions. .

IT'S KIND OF LIKE DEPLOYING, BUT YOU'RE STAYING IN THE UNITED STATES

— Tech. Sgt. Thomas Barnello

"It's kind of like deploying, but you're staying in the United States and you're living in a house," said Tech. Sgt. Thomas Barnello, the 321st Missile Squadron facility manager NCO in charge. "It looks similar to a ranch home, but of course this home can access the launch control center, and its equipment room which we're responsible for."

The MAF can house more than 20 missile support members at a time. Like security forces members and MAF chefs, facility managers are deployed to the missile field for four days at a time. Before "tripping out" to the field, they receive a pre-departure briefing and pick up all the supplies they'll need during the tour and anything requested by the facility manager they're relieving.

"The shifts total 72 hours, but you're out there for four days," Sergeant Barnello said. "You go out there on the first afternoon and you change over with the other FM. Then you're out there for two days and on the fourth day you come back. Typically, duty hours out there are from 7:30 a.m. to 4:30 p.m."

Throughout the duty day, the facility managers have a list of tasks they must complete. For example, water checks must be done to ensure the water is potable. Kitchen standards and cleanliness of the site must be upheld and equipment checks on diesel engines, environmental controls and equipment that supports the launch control capsule.

"I really enjoy the mission here," Sergeant Barnello said. "It's carrying on a tradition. Since 1959, these (MAFs) have been up and running and there have been people out there 24/7/365. It really is an honor to do it."

Inside the MAF, facility managers make sure everything in the living areas is clean and serviceable, but it's not something they do alone. Just like with a regular family, everyone has chores that make sure the "home" is in proper order. Airmen still have to take out the trash and straighten the day room. Coordinating those chores is how facility managers earned the unofficial title of "MAF Mom." The term comes with respect.

"The facility manager and chef are vital to the day-to-day operation of the missile alert facility," said 1st Lt. John Adams, a missileer. "The FM is looked to not only for his technical expertise, but also for his leadership topside."

In addition to repairing and cleaning the house and equipment, facility managers are responsible for winter snow removal

Staff Sgt. Robert Bond and Senior Airman Michael Lockart load supplies into Missile Alert Facility trucks. Sergeant Bond and Airman Lockart are food and laundry specialists with the 90th Operational Support Squadron.

(Below) Tech. Sgt Thomas Barnello (right) provides guidence to Tech. Sgt. Wayne Blankenship during a blast door opening proficiency training session outside a 319th Missile Squadron launch control capsule. This 16,000-pound door is two feet thick.

and lawn maintenance during spring and summer. The warmer months also bring the responsibilities of spring cleaning projects.

"It's just like your home," Sergeant Barnello said. "After the winter, you go through from top to bottom and prioritize your projects. By fall all the jobs should be done."

Sergeant Barnello said the big jobs are coordinated with the managers working on the opposite shift.

Between projects around the MAF house, the managers are also disaster preparedness NCOs, and they make sure there is a plan and that everyone knows how to execute that plan in case of a natural disaster.

"The MAFs are usually on the plains, and during the summer months, we've had to evacuate downstairs for tornadoes," he said. "You're pretty well prepared for it; it becomes second nature."

The job is a special-duty assignment. Facility managers volunteer for the four-year controlled tour with the option of extending for an additional year.

"I knew I was going to have to leave my last base and I wanted a say in where I went," said Sergeant Barnello, a 19-year Air Force veteran. "I knew this was the area of the country I wanted to be in, so this job was attractive to me."

As the NCO in charge, Sergeant Barnello pulls one tour per month and is responsible for scheduling and training other facility managers. When he isn't out at a MAF, he's preparing pre-departure briefings or checking enlisted performance reports, awards and medals packages.

Sergeant Barnello said that while he is away from his family when goes out to a MAF, he prefers the facility manager's schedule, and deploying in the local area, to that of his previous deployments as a munitions specialist. Deployments to a MAF still provide plenty of work, but it is more predictable. Between them, he has taken advantage of that pace for a little self improvement.

"You get used to it," he said. "You become very routine oriented. There's always something out there for you to do. That's on a regular basis, not counting the times the power goes out or something like that. Your time is filled pretty well. I've knocked out a bunch of classes. It's a good time, a good deal."

But, trips to the field can fall during the holidays or special occasions when family plans change in order to sustain the mission. Sergeant Barnello, his wife and daughter have learned to live the life of a missile family.

"My wife is prior military and my daughter is old enough to understand things aren't great all the time, so I'm fortunate that they understand," Sergeant Barnello said. "At my old job I deployed, so I was gone then. I pulled a remote, so I was gone then, so it's really not all that different."

"During Thanksgiving and Christmas, you can arrange for your family members to come out for the day," he said. "That's the only time (family members) can see where you work."

Sergeant Barnello is nearing the end of his tour as a facility manager and will have to decide between returning to the munitions career field or retiring. He said even with the chores and sometimes-long workdays, being a facility manager has been a positive experience.

"I'll miss the people," he said. "We all come from different backgrounds. I've learned more about services and other parts of the Air Force than I ever would have in my other job. You get a broader view of people who put in a lot of hard work."

BALANCING ACT:
LIFE ABOVE

(LEFT) 2nd Lt. Andrea Patrick, a missile combat crew deputy commander with the 319th Missile Squadron, takes a ride to watch the sun set on the plains. When she's on duty, friends help care for Ash. Lieutenant Patrick hopes to ride Ash in English saddle competitions someday.

Lieutenant Patrick (right), uses a firm grip and a steady pull to close the 8-ton launch control center blast door starting her 24-hour tour of duty about 60 feet under the ground. 1st Lt. John Adams, the missile combat crew commander, stands in the passage to maintain the two-person safety policy.

BELOW GROUND

BY STAFF SGT. MARESHAH HAYNES ✪ PHOTOS BY LANCE CHEUNG

(Left) 2nd Lt. Andrea Patrick, a missile combat crew deputy commander drives the six-passenger truck used to transport people and supplies to missile alert facilities.

(Below) Lieutenant Patrick works with her missile alert family to share care for her horse and dog while she is deployed to the alert facility.

In the wide-open spaces of Wyoming, it looks as though there's nothing but cows grazing and windmills turning. Looks really are deceiving. Beneath the surface, 60 feet underground, missile operators are working around the clock to keep America safe. The lives of those operators often are a balancing act between daylight and depth.

For 24 hours at a time, a two-person team is deployed to an underground launch control center, known informally as the capsule. They are on alert to launch intercontinental ballistic missiles if the need should arise. When their shift is over and the 25-ton blast door opens, they start on the long road home.

The home base for the missiles in this region is F.E. Warren Air Force Base near Cheyenne, Wyo. Commutes from the base to the sites can be more than two hours on unpaved, unmarked roads. There is plenty of time to think about the to-do list waiting at home.

THE SINGLE MISSILEER

For 2nd Lt. Andrea Patrick, a new missileer with less than a year on station, the road home means getting back to her family: her dog Liza and Ash, a 4-year-old gray quarter horse mare.

As a single missileer, Lieutenant Patrick still has responsibilities to attend to when she's not in the field and arrangements to make for her family's care when she is away.

Lieutenant Patrick spends the first part of every day she's at home tending to Liza and Ash.

"I come out (to the stables) every morning," she said. "I'm usually out here by 7:30 a.m. at the latest on my sleep-in mornings; the pup usually wakes me up at seven every morning. I usually get out here around 6:05 a.m. when I go to work, and I'll throw her a bunch of food and put a blanket over her."

When the lieutenant, a piano player and novice violinist, can't make it home to take care of Liza and Ash, she depends on her missile family to look after her girls.

"When I can't make it out to feed her, I have a good friend who will come out here and feed her," she said. "The same friend takes care of the dog. It works out pretty well because he has a Great Dane and we seem to be on opposite schedules. When I go out on alert, he'll take her and when I come back and he's gone I'll go pick the dogs up and he'll pick his up the next day."

There's still a trace of snow outside as Lieutenant Patrick sloshes through the ankle-deep muck in Ash's stall. The early morning feeding and stall cleaning may seem like a lot of work, but it is a labor of love for the lieutenant who has ridden since the first grade.

"It's just something that I'm comfortable with," Lieutenant Patrick said. "It's kind of a piece of home that came with me. Riding is always awesome. Up at the top of the hill, you get this huge view where you can see for miles. When you just want to get away from it all, you can take your horse out into the field and just take off running. It's a pretty awesome feeling."

Besides making time for her four-legged family in her 24-hours-on-72-hours-off schedule, Lieutenant Patrick tries to make time to see her family in Alabama. That can be a challenge because vacation time for missileers is a rare and valued commodity.

"The leave schedule is pretty insane," she said. "My sister is having a wedding at the end of July and I had to put in for leave in February. There are already three other (missile crewmembers) who put in leave for the end of July and mine is still something considered an exception. It's my twin sister's wedding, I have to go!"

Although she would like nothing more than to be there to see her sister, who is her best friend and fellow horse lover, walk down the aisle, she and her biological family understand that her missile family needs her.

In this training simulator, missileers train to follow procedures no matter what challenges face them.

(Below) Capt. Aaron Baum with his wife, Laurie and their children. The family is used to scheduling special occasions around his alert schedule.

Lieutenant Patrick said her family was disappointed when she told them she might not make it to the wedding. She comes from a military family and, though they may not like it, they do understand.

Despite the hectic schedule and time away from her family, friends and pets, there's one thing that keeps her in the missile career field, at least for now: "My love of the Air Force."

She revealed that she has other Air Force plans for her future. "I was a pre-law major in college and eventually I would like to go (into the staff judge advocate career field)."

THE FAMILY MAN

For Capt. Aaron Baum, one trip back home after alert duty had him arriving just before the birth of his son. Four hours after returning from the field, his wife's water broke.

The father of two boys, a 4-year-old and a 1-year-old, is no stranger to the demands of a missileer's schedule. As a senior crewmember and instructor, the captain still pulls alert twice a month, in addition to spending time with line crews in the missile procedure trainer. Though alerts are usually a single 24-hour period, planning and travel add time to that duty period.

"THIS IS MY JOB. THIS IS WHAT I'M DOING FOR THE AIR FORCE. THIS IS WHAT I'M DOING FOR MY COUNTRY."

— Capt. Aaron Baum

"I'm here on base at about seven in the morning to get things ready for tripping out to the field," Captain Baum said. "We have a mission planning meeting at 7:30 a.m. and at 8 a.m. we have a predeparture meeting with the whole team that's going out to the field where we talk about maintenance, any issues with security, things that are going on in the field so we're prepared when we get out there. Then I'll go out to the missile field about 8:30. Depending on where I'm going I can be there anywhere between 9:30 and 11 a.m. I'll change

over with the crew who was there the day before. It takes about an hour to change over." Then the 24 hours start.

Once the schedule on alert starts, there's still another schedule to establish, the one that allows both crewmembers time for rest and time for work.

"We normally split up the sleep shifts," Captain Baum said. "One of us will sleep about eight hours during the day and the other one will sleep during the evening. It's a little bit awkward but you get used to it.

"Other than (alert duty), the rest of the days I'm at work by 7:30 here on base and getting things ready for teaching," he said.

Captain Baum's wife, Laurie, vividly remembers the days when their family schedule was more hectic and she first learned how long 24-hour shifts really take.

"I had no idea of what he'd be doing, no idea," Baum said. "He would be going out for 24 hours at a time. I think, 'Oh, that's 8 o'clock to 8 o'clock.' No, that's 8 o'clock in the morning (Monday) to 5 o'clock in the evening Tuesday. I really didn't understand, I guess."

Even Captain Baum's 4-year-old son had to learn to deal with his father being gone for days on end.

"It's something that we prepare beforehand," Captain Baum said. "When I tell him I'm going to work, he'll ask, 'Are you sleeping at the missiles or are you coming home tomorrow?' And I tell him, 'I'll be home for dinner,' or, 'No, I'm sleeping at the missiles and I'll be home Tuesday,' or, 'Saturday, Daddy's coming home.' But he understands a lot better now."

Time off is still scarce for the instructor as it is for line crewmembers and holiday scheduling is a huge challenge for the family. Because of that, the Baum family has had to use technology to keep Christmas on the 'right' day in December.

"We"ve done Christmas on the 22nd, we've done it on the 26th," Captain Baum said. "I've asked twice to reset the date on the digital camera because Santa doesn't come on the 22nd."

Even with the juggling and date changes, the Baum family decided this lifestyle, that of a missile family, is their contribution to the Air Force mission.

"I grew up in a pretty patriotic family and that's what originally drove me into the Air Force," said the captain who once wanted to become a pilot but decided against it to lessen the time away from his family.

"I think part of it is knowing that this is my job. This is what I'm doing for the Air Force. This is what I'm doing for my country. If that means going out on Christmas, ok, someone's gotta do it."

2nd Lt. Andrea Patrick (left), a missile combat crew deputy commander and 1st Lt. John Adams (right), MCC commander are approximately 60 feet underground, below the missile alert facility that supports them.

MISSILEER

1st Lt. John Adams

photo by Gerald Teano

"The mentoring opportunities that the Air Force has given me made me a better person. Not only in my profession, but in all facets of life. I think that is one of the most important things anyone can do for someone else — taking someone under your wing and making him a better person. If you can pay it forward and make someone better overall, it pays dividends not only for the Air Force, but society as a whole."

HOME UNIT/BASE:
319TH MISSILE SQUADRON,
F.E. WARREN AIR FORCE BASE, WYO.

HOMETOWN:
RENO, NEV.

ENTERED AIR FORCE:
APRIL 1997, COMMISSIONED JUNE 2007

PRIMARY AFSC:
13S SPACE AND MISSILE

Chefs know that a pair of clean hands is the best kitchen tool.

FEEDING THE MISSION

THE MISSILE ALERT FACILITY CHEF

STORY BY STAFF SGT MARESHAH HAYNES
PHOTOS BY LANCE CHEUNG

In a quaint little place, off the beaten path, there's an award-winning chef catering to an exclusive clientele. The atmosphere is homey, and the meals are prepared fresh to order.

The kitchen won't be featured in any gourmet magazine because it's the kitchen at a missile alert facility near F.E. Warren Air Force Base, Wyo. The award-winning chef is Staff Sgt. John Shirley, the Missile Alert Facility Chef of the Year.

Customers can choose menu items like spaghetti with meat sauce and the daily vegetable, Philly cheese steaks subs or the house special, a grilled chicken wrap with rice, bacon and cheese.

The MAF comprises a support building where the chef, facility manager and security forces members live while in the field. Under their feet is a missile launch control center, a missile crew and an equipment area.

Staff Sgt. John Shirley shows Airman Daylynn Brown the importance of looking at a plated meal from different angles to ensure the presentation is appealing to their customers at a 321st Missile Squadron missile alert facility.

Fresh ingredients are important to ensure quality remains high.

Staff Sgt. John Shirley checks the refrigerated food inventory at a 321st Missile Squadron missile alert facility. Any needed supplies are gathered and brought out with the relief chef.

CHEFS IMPROVE THE QUALITY OF LIFE TOPSIDE.

— 1st Lt. John Adams

Unlike traditional Air Force chefs who work in the base dining facilities, MAF chefs are assigned to the operations group instead of a force support squadron. In addition to the skills learned in technical school, MAF chefs get three tours of on-the-job training sessions to teach them how to manage the kitchen in the field before they go on tours alone. The extra mentoring is important because even the most junior Airman can be the only chef on site during the tour.

As a MAF chef, it's Sergeant Shirley's job to prepare breakfast, lunch, dinner and a midnight meal for the missile alert family. He also takes care of the other chefs who work out of his MAF.

"As the site's senior chef, I'm in charge of the whole kitchen and I oversee the other team chefs who come out to my site," said Sergeant Shirley. "I keep track of all the paperwork and make sure everything is good to go. I'm also a chef trainer for my squadron and that does give me the opportunity to mentor the younger chefs and instill in them … the importance of keeping a positive attitude while we're out there. (I remind them that) we do have an important job.

"If we're not doing our job properly …

Airman 1st Class Bryan Gill, a 90th Missile Security Forces Squadron Airman, just came in from security patrol. A hot dinner of marinated, grilled chicken breast, brocolli and a salad. Airmen appreciate a hot meal after a long, cold, day on patrol.

foods aren't cooked properly, people can get sick," he said. That can really degrade the mission and the combat capability."

Those who need the chef's services understand what a good meal means while away from home.

"Chefs improve the quality-of-life topside," said 1st Lt. John Adams, a missile crew member. "When there's an outstanding chef out in the field, people usually know and their morale improves. A hot meal in the cold out here makes it better while in the field."

To Sergeant Shirley, serving as the chef gives him a chance to apply a little golden rule to an Air Force core value.

"I don't know about you, but if I was down in the capsule, I would want somebody to make me good food," Sergeant Shirley said.

Sergeant Shirley said tours to the MAF for chefs assigned the 321st Missile Squadron can be anywhere from four to seven days long, depending on manning.

Being away from home often can also affect the chefs' families. Sergeant Shirley, his wife and their 5-year-old daughter have learned to make the schedule work for them.

"We've kind of gotten into a routine now," Sergeant Shirley, a native of Crestview, Fla., said. "On the days that I'm home, I take my daughter to the (Child Development Center) while my wife goes to school full time. Usually, the day before, I try to spend a little more time than usual with her. I just let her know I'll see her in a few days. She gets it now."

Sergeant Shirley said while he's away, his wife has to do all of the taxiing and care so, giving her a break when he's home by doing the daycare run, lightens her load, and gives him that extra time with his daughter.

Before going out to the missile field for a tour, or "tripping out" as it's referred to in the missile world, the MAF chef will pick up all the ingredients needed to prepare enough meals for the length of the tour. After the supplies are loaded and the briefings completed, it's time to drive out to the alert facility.

The drive, depending on the location, can be anywhere from a few minutes to a couple of hours long. Once he gets there, his tour starts and each duty day begins as the sun rises over the plains.

"The first meal has to go out by 6 a.m.," said Sergeant Shirley. "So, I'm usually up by 5 a.m. and in the kitchen by 5:30 a.m."

Meal preparation and clean-up are the tasks that take up most of his duty day.

"I can be in the kitchen cooking for about an hour to 1.5 hours, and clean up for an hour if it's a slow day."

In his professionally-equipped kitchen, Sergeant Shirley said he prepares meals for six to 10 people and cooks about 50 meals on an average tour.

While the Airmen on-site are enjoying those meals at dining room tables or at the counter in front of the TV, Sergeant Shirley, a five-year Air Force veteran, has time to come to the "front of the house" and interact with his diners.

"Most of the time I'm in the kitchen cooking while they're eating, but I do take the time to come out and talk," he said. "I think that's something different I do from a lot of chefs. I enjoy my job and I enjoy the people I interact with."

While Sergeant Shirley said he enjoys his job, sometimes he has to forego time preparing meals for his family during holidays to prepare meals for his MAF family. During the Thanksgiving and Christmas holidays, MAF chefs prepare a special holiday meal, similar to the ones prepared in the dining facilities with all the fixings. During these special meals, MAF members can get approval for their immediate family members to come out and enjoy the meal with them.

"For Thanksgiving and Christmas, we have a set holiday meal," he said. "We cook a ham and a turkey, stuffing, corn, green beans, rolls, mashed potatoes and different types of pies. We try to make it as normal as would be as if you were at home.

"My first Thanksgiving out in the field my family came out," said Sergeant Shirley. "It was nice because they got to see what we do and get a better understanding, especially my daughter, of why I'm gone. She enjoyed it."

Sergeant Shirley's outlook about his mission is positive even though his schedule takes him away from his family and is full of long duty days.

"I wasn't really excited when I first found out that I was going to be a missile chef because I didn't know what it was," he said.

After five years in the Air Force, he knows his work as a missile alert chef all simmers, sautés and boils down to one thing.

"The way I see it, the key thing about my job … is customer service." Sergeant Shirley said. "We have a direct impact on the morale of the people who are out there. No one is in a good mood if you give him a poor quality meal."

photo by Staff Sgt. Robert Barney

Chief Master Sgt. of the Air Force James A. Roy speaks to 379th Expeditionary Maintenance Squadron Airmen at an undisclosed location in Southwest Asia. Chief Roy was touring the U.S. Air Forces Central Command area of responsibility, visiting Airmen and addressing issues affecting service members deployed in support of operations Iraqi and enduring freedom.

CMSAF

LOOKING OUT FOR AIRMEN DURING FIRST YEAR IN OFFICE

STORY BY RANDY ROUGHTON

photo by Senior Airman Christopher Hubenthal

Chief Master Sgt. of the Air Force James A. Roy met Airmen from the 532nd Expeditionary Security Forces Squadron at Joint Base Balad, Iraq. During his first visit to JBB as the Chief Master Sergeant of the Air Force, he discussed issues Airmen have encountered in their career fields and while deployed to JBB.

The 16th chief master sergeant of the Air Force reached his first anniversary in office June 30. He remains committed to the Air Force priorities and his key focus areas for the enlisted force. Chief James A. Roy has become even more committed to those goals after visiting and talking to Airmen in the past year, particularly those serving in the U.S. Central Command's area of responsibility in southwest Asia.

"IT IS CRITICAL THAT OUR AIRMEN HAVE TRAINING AND EDUCATION TO THINK WITH A GLOBAL PERSPECTIVE, AND OPERATE IN AN EXPEDITIONARY ENVIRONMENT."

— Chief Master Sergeant of the Air Force James A. Roy

The service's top noncommissioned officer is the personal adviser to the chief of staff and secretary of the Air Force on the enlisted force and provides direction for enlisted members and represents their interests to government leaders. As part of his duties, he travels worldwide to visit Airmen at their duty locations, and toured Minot Air Force Base, N.D., after the 5th Bomb Wing was newly aligned under Global Strike Command. Conversations with Airmen "down-range" also reinforced Chief Roy's targeted goals of appropriate combat training, physical fitness, and supporting both Airmen and families, especially during deployments.

A year later, Chief Roy sees the mission evolving for all military services. Combat troops are scheduled to leave Iraq by the end of 2011, and the chief expects the Air Force will play an even greater role in Afghanistan's security and ability to govern itself. This is likely to make his goals even more essential for the Air Force to retain highly-trained Airmen.

More than 37,000 Airmen are deployed to 153 locations worldwide and 133,000 provide strategic mobility, space and missile capabilities, command and control, intelligence, surveillance and reconnaissance to joint warfighters. The chief said recently the Air Force must manage the deployment tempo to keep Airmen with critical skills. This may involve filling critically undermanned career fields, offering family support programs and continuing to give Airmen the equipment and training necessary to do their jobs.

"Deliberately developing our Airmen is a key priority," the Air Force's top enlisted Airman said during testimony before the House Committee on Appropriations Subcommittee on Military Construction and Veterans Affairs in February. "Our Airmen must have a mix of skills so the Air Force can continue providing combat-ready, expeditionary forces to combatant commanders, now and in the future. The Air Force is focused on providing the right expeditionary combat skills needed for our Airmen to fly, fight and win. It is critical that our Airmen have training and education to think with a global perspective and operate in an expeditionary environment."

One year into his tenure, Chief Roy remains committed to managing resources to meet the operational tempo, while supporting Air Force families during deployments, as well as those Airmen contributing to the fight at their home stations. He also has a vision of combining combat experiences with training and education opportunities, including professional military education.

"Airmen are our most valuable asset," Chief Roy said. "We need the right number of Airmen with the right skills to support combatant commander requirements. We are firmly committed to organizing, training and equipping our Airmen to the highest possible standards."

CMSAF ROY'S KEY FOCUS AREAS:

- Ready for joint and coalition operations
- Deliberately developed
- Resilient Airmen and families

Air Commandos

NEXT GENERATION TAKES WING

BY STAFF SGT. J. PAUL CROXON ✪ PHOTOS BY STAFF SGT. DESIREE N. PALACIOS

Editor's Note: *Although this article highlights one member of the 8th Special Operations Squadron, the ultimate sacrifice was made by two fellow Airmen, Maj. Randell Voas and Senior Master Sgt. James Lackey, April 8, when their CV-22 crashed during a combat mission in Afghanistan. An Army Soldier and a civilian employee also died in the crash, and several other service members were injured. This article was written prior to that accident.*

Izaiah Wiggins was born into this relationship with his father. For the first two years of his life he learned about him mostly via video conferencing. He never got the chance to know his dad when he was the protocol NCO or the recruiter with a stable work schedule. Instead, he got to know the special operations Airman, a father who frequently leaves without saying where he's going, how long he'll be there or when he will be able to talk to him again.

Tech. Sgt. Dontrell Wiggins is a CV-22 Osprey flight engineer with the 8th Special Operations Squadron at Hurlburt Field, Fla. Before coming to the Osprey program in 2008 he was a recruiter, a protocol NCO and, before that, a C-5 Galaxy flight engineer. For him, the Osprey represents the tip of the spear in terms of combat capabilities. But working with such a capable weapons system requires him to sacrifice time with his family. That sacrifice began almost from the time he picked up the phone and heard he was leaving the recruiting service and coming back into a flight suit.

Sergeant Wiggins said he was doing his recruiting job one day when his chief called him up and told him the flying community needed him back. He knew the demands flying required from his time as a C-5 flight engineer. He went home and told his wife what to expect. He did his best to help Izaiah understand that dad was going to be away a lot.

Staff Sgt. Alex Para aboard a night mission on a CV-22 Osprey from Hurlburt Field, Fla. Sergeant Para is a flight engineer assigned to the 8th Special Operations Squadron.

(Below) Master Sgt. Robert Reynolds conducts a preflight inspection before a CV-22 Osprey flight. Sergeant Reynolds is a flight engineer also assigned to the 8th SOS at Hurlburt Field, Fla.

"THIS THING IS A LOT FASTER, A LOT MORE MANEUVERABLE AND HAS WAY BETTER AVIONICS TO KEEP US SAFE FROM 99 PERCENT OF THE THREATS OUT THERE"

— Tech. Sgt. Dontrell Wiggins

"He knows I go and I come," said Sergeant Wiggins. "For a long time, our relationship was through a computer. That's how he knew who I was. That's how he didn't forget who I was. [When I saw him again he is] like, 'oh, you're the guy from the computer who tells me he loves me all the time and blows me kisses through the computer.' He didn't get to know the C-5 guy. He got to know the [Air Force Special Operations Command] guy. He sort of got the short end of the stick."

Sergeant Wiggins' wife, Jacqui, had to learn what AFSOC required. When Sergeant Wiggins went to Kirtland Air Force Base, N.M., to attend CV-22 flight engineer training, he said he insisted his wife, pregnant with Izaiah, go back home to California and wait until things calmed down. After technical school he moved to Hurlburt Field with the intent to move his family, but his first temporary duty deployment was already waiting for him when he drove through the gate.

"I was here two months till that first TDY and I told her to just stay," he said. "She had a nice job there; her family was there so just stay. That turned into a year-and-a-half of, 'well, I'm gone again so don't come.' Finally, when I was [at Joint Base Balad, Iraq], I said, 'enough is enough, we need to be a family again and not do this whole bi-coastal thing.' So I got home from Balad, hopped on an airplane and brought the family back here."

Though Sergeant Wiggins sees his family a little more now that they live on the same coast, he is still frequently away from home for deployments and training. Sergeant Wiggins said his wife accepts those hardships knowing their sacrifice is required to make the country safer for Izaiah.

"When she married me, she signed up like I did, at the beck and call of the country," he said. "We do what we do because we love America and we want to defend it. I don't put myself in harm's way because I'm some adrenaline junky. I want this place to be safe for my kid to grow up. I want them to have all the cool stuff and see all the cool stuff I got to see growing up, without worrying about someone flying a frickin' airplane into a building."

Tech. Sgt. Dontrell Wiggins is a flight engineer on the CV-22 Osprey. He's assigned to the 8th Special Operations Squadron at Hurlburt Field, Fla.

Senior Airman Chris Swearingen cleans the windshield of a CV-22 Osprey. Airman Swearington is assigned to Hurlburt Field, Fla.

(Below)A CV-22 Osprey sits on the flight line at Hurlburt Field, Fla. It's attached to the 8th Special Operations Squadron.

(Opposite) Tech. Sgt. Carlos Delgado and Staff Sgt. Andrew Brown run the weapons inspection checklist before a mission.

Having a husband and father often away from home isn't the only sacrifice the Wiggins family must make. Another is the classified nature of the CV-22 mission that requires Sergeant Wiggins keep much of what he does, including upcoming deployments, from his wife.

"I told her upfront when I got this job that there are times when I can't tell her where I'm going or what I'm doing, when I'm going to call her or when I'm going to be back," he said. "It sounds cool in the movies, but it really sucks in real life. I had to give her the disclaimer that I may disappear for a week or two and she'll not know anything about where I am or what I'm doing until I can call her."

Things are a little easier for little Izaiah but only because, in his mind, Daddy always flies around and is gone all the time.

"When it comes to talking to my son about what I do, it's easy because he's two, so communicating with him is kind of like hanging out with a bunch of dudes," Sergeant Wiggins said. "For me, it's just lots of hugs and kisses. I grab him and if he doesn't want it, I kiss him anyway because I might have to pack up and go tomorrow. All I can do is be the best dad I can be as much and as often as possible. And then, when I stop playing war, stop playing Air Force, and I'm there every day, he'll be like, 'dude really? Isn't there someplace you need to go?'"

For Sergeant Wiggins, it's all worth it to be working with an aircraft that represents the future of Air Force special operations.

"We do that deep penetration, low-level, low-illume, nobody knows we're supposed to be there, Tom Clancy kind of stuff," he said in an excited tone. "If you want to be with the newest stuff, cutting edge technology, working with the tip of the spear, the most elite forces on this planet, this is the program you want to be in. There's nothing more high-speed than the CV-22. There's nothing like it in the world. Nobody has it but us."

According to Sergeant Wiggins, the CV-22 is a big computer with capabilities that are still being learned. Each time there's a software update, and they happen every year, the aircraft's capabilities change.

"The maintainer says, 'hey, I've got to update the software,' and plugs a computer into the aircraft. All right, everything changed: parameters changed, numbers changed, speed changed, limitations changed. This thing is a computer," he said. "Software enhances the capabilities. It makes it a better CV-22. It's like going from version 1.0 to version 1.5. I just got a better, badder CV-22."

One of the biggest capabilities the CV-22 brings to the fight is speed. Maj. Derrick Jee, a CV-22 pilot who used to fly HH-60 Blackhawk and MH-53 Pave Low helicopters, said a helicopter might go 110 knots but the Osprey easily does twice that. For an Airman, Soldier, Sailor or Marine on the ground behind enemy lines, that speed is greatly appreciated.

"It's not a helicopter, it's not an airplane. It's a tilt-rotor," Major Jee said. "Helicopter guys tend to fly it great in helicopter mode and fixed-wing guys do great in airplane mode. The first batch of pipeline tilt-rotor pilots are starting to fly it and they don't have to relearn how to fly."

Sergeant Wiggins compares the Osprey to similar platforms like the helicopters used by units like the Army's 160th Special Operations Air Regiment and says the Osprey was tailor-made for the AFSOC mission.

"This thing is a lot faster, a lot more maneuverable and has way better avionics to keep us safe from 99 percent of the threats out there," he said, comparing it to his time on the C-5. "I feel safe. If my concern is somebody shooting me, yeah, I want to be in this thing. I'd probably take this thing over a lot of other aircraft in the inventory."

That comfort aboard the Osprey comes from long hours of training and repeated deployments. As the only operational unit with the Osprey, the 8th SOS has no other unit to rotate with. However, another squadron, the 20th SOS at Cannon AFB, N.M., soon will become the second of four planned CV-22 squadrons and will help share some of the load. Until then, Sergeant Wiggins will continue to deploy and talk to Izaiah through the computer.

"For me, at 17.5 years, I'm supposed to be preparing myself to walk away," Sergeant Wiggins said. "I'm supposed to be getting ready to hang up the old flight suit but ... I will continue to do this until my body will not let me do it anymore."

MAINTAINING CAMARADERIE

AC-130 MAINTAINERS WORK TOGETHER TO KEEP GUNSHIPS DEPLOYABLE

STORY BY STAFF SGT. J. PAUL CROXON ✪ PHOTOS BY STAFF SGT. DESIREE N. PALACIOS

The AC-130 Gunship's primary missions include close air support, air interdiction and force protection.

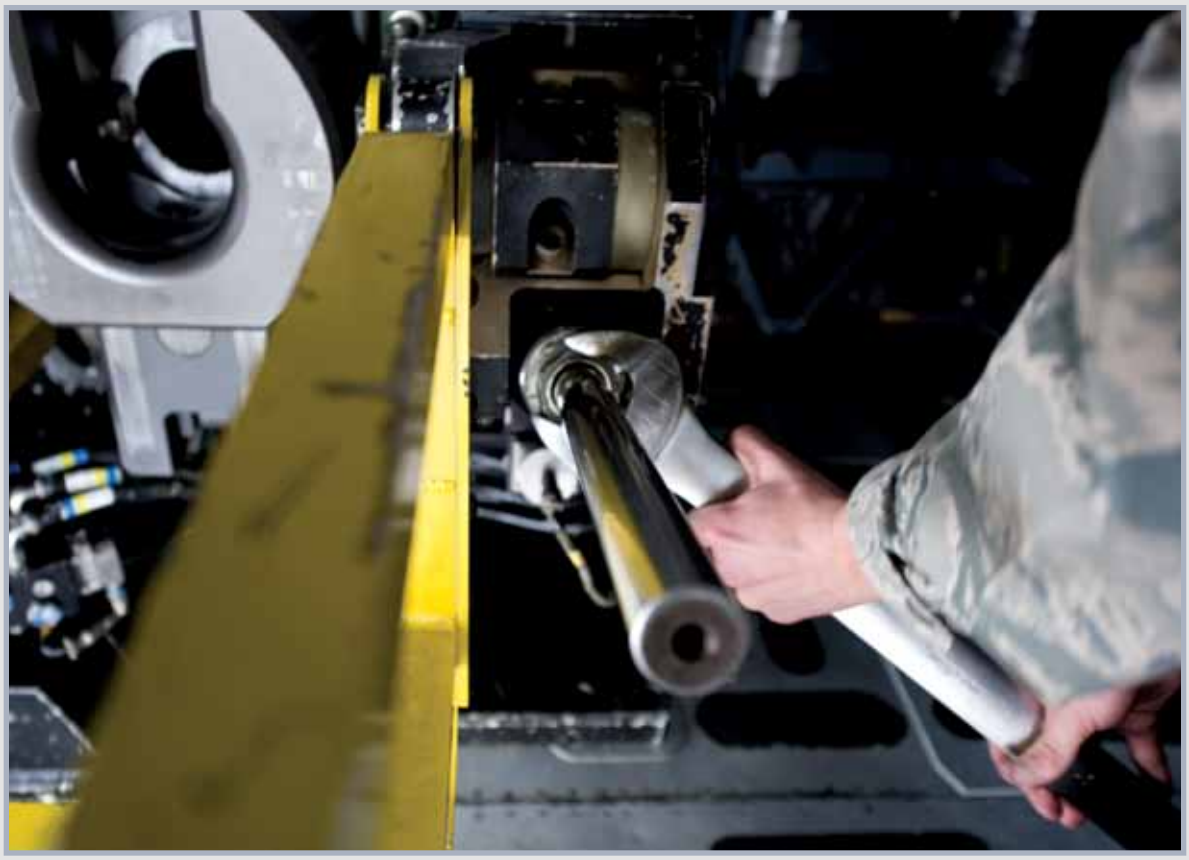
Maintainers, like Airmen in many career fields, have a healthy amount of competitive spirit. This is true in the special operations world as well. Crew chiefs, weapons maintenance technicians and guidance and control technicians all have different responsibilities, but one common goal — to keep their bird ready to fly.

The AC-130U Spooky Gunship is the only Air Force weapon system to use a 105mm howitzer that fires shells weighing about 40 pounds and that are as big around as a plastic two-liter soda bottle. The AC-130 takes almost as many aircrew members to operate it as it does maintainers to keep it flying. Its crew of 13 is three times larger than the crew of the C-130 Hercules it was built on, and it uses a sophisticated and highly sensitive suite of sensors to track its targets before raining down its devastating firepower.

The newest AC-130 is nearly 20 years old, making maintenance difficult enough for such a complex machine without its weapons rattling and stressing the airframe with every shot. To keep these aircraft ready for short-notice deployments, Airmen from various specialties at Hurlburt Field, Fla., must work together while sustaining their readiness to deploy. For them, maintaining the AC-130 is a labor of love and a special operations brotherhood.

Senior Airman Kyle Broadwell, a weapons maintenance technician, uses big tools to maintain the 105mm Howitzer and other weapons. Wrenches as long as his arm and hammers that appear more like medieval weapons are employed to beat, twist and force parts into working order.

In contrast to Airman Broadwell, Senior Airman Nick Cardiges, a guidance and control technician, uses delicate, precise tools. He is responsible for maintaining the navigation control and firing computers. The challenge is making the brute force of Airman Broadwell's tools work in harmony with the finesse of Airman Cardiges'. Together they make sure the guns fire true.



Senior Airman Kyle Broadwell does some maintenance work on an AC-130 Gunship at Hurlburt Field, Fla. Airman Broadwell is a weapons specialist.

"It's a very complex system," said Airman Cardiges, as he points out some of the systems found only on the AC-130. "If the crew reports that there is a problem with the guns, it could be a number of things. The only way we're going to be able to find out what's wrong is if Kyle and I work together to figure it out."

"Sometimes I'll be back here working with the guns while Nick is up front working on the computer," said Airman Broadwell. "We'll talk over the checklists to find out what's wrong. Sometimes it's a problem on my end, sometimes it's on his."

Airman Broadwell is soft-spoken, only cracking the occasional joke with his fellow maintainers, saving his best material for his AFSOC brothers. As he deftly moves between the various weapons that dominate the cargo hold, he points out the features of the howitzer.

"It's the only place in the Air Force you'll see one of these," he says, grinning as he talks about what it can do when it's properly maintained. "When it fires, the crew can feel it. It shakes the entire aircraft, and when it's used, the target on the ground is completely destroyed."

Flying while firing those guns is a carefully choreographed dance between pilots, electronic warfare officers, aerial gunners, loadmasters, flight engineers and sensor operators. It has come a long way since 1964 when Air Force leaders first got the idea to put a GAU-2/A minigun on a C-131B Samaritan.

If something does break, or if fine-tuning is required, the crew fills out forms and briefs members from every maintenance shop. For instance, if a problem arises with the navigation equipment, a GATM troop like Airman Cardiges is present to ask follow-on questions.

"We talk to the crew and ask what they were doing when the problem arose, what exactly happened, what they might have done to correct it, things like that," said Airman Cardiges, who, unlike Airman Broadwell, seems to always have a joke ready. He's tall and confident in his knowledge of the AC-130. Hurlburt Field was his first assignment and, despite working in a career field responsible for numerous aircraft, the Spooky is all he's known.

"WHEN IT COMES TO GETTING THIS THING IN THE AIR, WE ALL HELP EACH OTHER OUT."

— Tech. Sgt. Taylor Miller

"The difficult thing about the AC-130 is that the systems are so interconnected. I know about the computers, but often a problem isn't isolated to one system or the responsibility of one career field to fix it. That's where the crew chiefs come into the picture."

Airman Broadwell and Airman Cardiges are specialists. They have intimate knowledge of the systems in their care. If something goes wrong with the guns or the guidance and control systems, they are the ones to call. However, crew chiefs are the jacks-of-all-trades who have broad knowledge of the aircraft as a complete system. In addition to routine maintenance these decades old aircraft require, it's the crew chiefs who determine which specialists are needed.

Tech. Sgt. Taylor Miller knows Airmen Broadwell and Cardiges well. He's worked with them often. Their positive relationship is evident by the way the younger Airmen and the crew chief tease each other. For these three Airmen, the AC-130 represents a challenge that can only be met through camaraderie and cooperation. There's no place for squabbling over whose job is more important when the unit could get the call at any moment and the gunship they're working on is needed in the battle space.

It's the unique mission and capabilities of the aircraft, coupled with the brotherhood of maintenance Airmen, who deploy as often as their aircraft, that commands a certain reverence from the men and women who are a part of it. Even Sergeant Miller, who has worked with other C-130 variants, describes the gunship as a joy and a challenge. His respect and affection for it are obvious.

"We joke with each other and there is teasing between specialties but, when it comes to getting this thing in the air, we all help each other out," he said. "Even if a maintainer from a different specialty needs help, we'll pitch in and do what we can. No one sits around when they can help."

Senior Airman Kyle Broadwell, center, Senior Airman Nick Cardiges, left, and Tech. Sgt. Taylor Miller are assigned to the Special Operations Aircraft Maintenance Squadron at Hurlburt Field, Fla.

STORY BY RANDY ROUGHTON ✪ PHOTOS BY STAFF SGT. BENNE J. DAVIS III

REMEMBER THE TITAN II

COLD WAR MEMORIES UNDER THE ARIZONA SUN

The moment Yvonne Morris stepped through the Titan II missile launch complex access portal, a scent from the past assaulted her senses. Some people associate air raid sirens and Emergency Broadcast System messages with their memories from the Cold War era. For Morris, it's the aroma of sausage and eggs mingled with hydraulic fluid and stale cigarette smoke.

Fourteen years passed between the deactivation of the missile sites and Morris' return to the Launch Complex 571-7 control room, now a part of the Titan Missile Museum 25 miles south of Tucson in Sahuarita, Ariz. The bunker looked, and smelled, like Morris remembered. The big difference now is the noise level. It is considerably quieter than when the constant humming of equipment surrounded her when she served as a missile crew commander at sites near Davis-Monthan Air Force Base, Ariz.

When the 390th Strategic Missile Wing deactivated its 18 Titan II missiles between 1982 and 1984, Morris had no plans to visit another missile site. Then she visited the museum with her uncle in 1998. She soon began giving tours as a docent and became the museum's executive director six years later. Looking back, Morris is amazed at the responsibility she faced right out of college.

"When you're young, you're thinking, 'I can do anything. I'm bulletproof. I can do this,'" Morris said. "Then you get so busy doing it, you really don't have time to think you're in charge of a $40 million nuclear weapon system.

"This was a job with the highest potential consequences for a mistake," she said." You either had to step up and perform as required, or get moved out of the program.

"It never occurred to me that I might not have what I needed to do the job," she continued. "Twenty-five years later, I'm now thinking, when I was 23, I had the most important job I'll ever have in my entire life."

In an era of "peace by deterrence" and "mutually assured destruction," the Titan II held the largest warhead on an American ICBM. The 103-foot intercontinental ballistic missile could be launched in less than a minute from its hardened silo 150 feet beneath the southern Arizona desert and reach its target 6,000 miles away in 30 minutes.

But it was more than a formidable weapon in the arms race against the Soviet Union; Titan II boosted all 10 manned Gemini space capsules into orbit in 1965 and 1966 and lifted astronaut Edward H. White II when he became the first American to complete a spacewalk.

Beginning in 1963, the Air Force deployed 54 Titan II missiles in groups of 18 at three bases in Arizona, Arkansas and Kansas. All 54 Titans were on alert by the end of the year. Each site consisted of a missile silo, launch control facility and access portal, manned at all times by a four-person missile combat crew.

The Arizona Aerospace Foundation operates the Titan Missile Museum which opened in 1986. On display in the museum's silo is N-10, which was the missile used to train everyone who worked on the Titan II program at Sheppard Air Force Base, Texas. The museum's missile site is one of two ICBM sites worldwide open to the general public and the only remaining Titan II launch control complex. The site retained all ground command and control facilities above and below ground, including the seven-story missile and silo. Titan II's 760-ton silo closure door, which protected the missile from a nuclear hit nearby, remains permanently half-open.

Like Morris, retired Air Force Lt. Col. Dwight Mears finds his surroundings inside the museum's launch control facility familiar. Colonel Mears was also a missile combat crew commander, although his duty was at McConnell Air Force Base, Kan., and took place a decade before Morris' missile duty in the 1970s. McConnell's missiles became operational on Dec. 12, 1963, 20 days after President John F. Kennedy was assassinated. Mears became a docent at the museum in 2003 after he retired from the military and a second career in computer security. He leads tours through the museum four or five times a month.

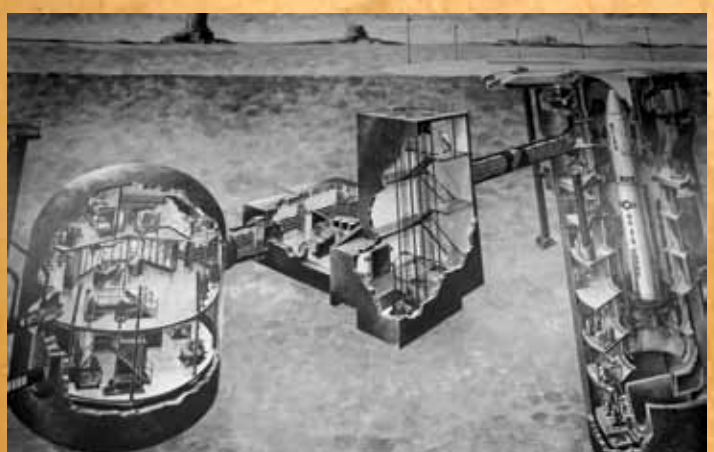
"When I retired, I always thought about what I needed to do to give back," Mears said. "There are a lot of different things people are suited for. I think I'm best suited to help to tell the story of the Cold War."

In Mears' day, missile crews pulled six to nine alerts a month. Crews at the Kansas sites also had to deal with harsh weather, which sometimes stretched 24-hour alerts into 30 hours, and in a few cases, several days. The crewmembers were conscious of the grave responsibility of their job, but tried not to dwell on the possibilities of nuclear war.

"We knew what we were dealing with," Mears said. "We felt a conflict would never occur, but we trained for that eventuality, thinking that if it did, it would be very quick.

The Sahuarita, Ariz. Titan Missile Museum is the only publicly accessible Titan II missile site.

(Below) An artist's illustration of a Titan II missile site at the PIMA Air and Space museum. The underground complex housed the 103-foot tall Titan II missile with 8-foot thick silo walls and 3-ton blast doors.



The Titan II Intercontinental Ballistic Missile was the first liquid propelled missile that could be launched from underground.

(Left) Retired Lt. Col. Dwight Mears, a former missile combat crew commander works as a docent guiding tours four to fives times a month

"One side or the other would have to be extremely desperate to launch into something that they would lose everything in, as they would in the conduct of a nuclear war," he said. "So, I think most of us were confident that it would never happen. The only thing we thought that could've happened was somebody on one side making an error. While I believed we'd never go to war, there was always the possibility."

The Cold War continued into the 1980s, when Morris served as missile combat crew commander after she was selected to be among the first group of women recruited for Titan II command duty. Morris, an ROTC cadet at the University of Virginia, was selected in 1978. She graduated from missile launch officer training in 1981.

She said she relied on her humor and the fast pace to keep her mind from dwelling on the grim possibilities of the job, along with the weight of responsibility placed on her young shoulders.

"You had to walk a fine line by allowing the sense of responsibility to motivate you without getting so mired in it that it paralyzed you," Morris said. "I think the Air Force was really clever in the way they handled it. There was as much human engineering that went into the design of the missile sites as there was physical engineering.

"They kept you so busy and focused on what was in front of you that there wasn't time to dwell on the repercussions in case you had to do the one thing you were ultimately responsible for — launching a missile," she said. "The only down time was a long stretch between 11 p.m. and 4 a.m. The rest of the time, you're training and drilling. If you're focused on that, you're not thinking about Armageddon."

The quarters, which Morris and her crew called "Motel 2," consisted of barracks-style bunk beds and a bathroom that offered a sink, shower and toilet. Motel 2 also had a small kitchen with a refrigerator, microwave, stove and toaster. In addition to her duties as the museum's executive director, Morris is working on a book about the Titan II and Cold War that she has given the working title, "Missiles in the Back yard, Bomb Shelters in the Basement."

For years after leaving that part of her life behind, Morris thought, like many crewmembers: "If I never see another missile site, it will be too soon." Now, one Tuesday a month, Morris takes museum visitors through the site and tries to get them to see, hear and even smell some of what missile crews experienced while they were on alert during the height of the Cold War.

"After I moved back to Tucson in 1985, I knew the museum was there, but I felt no desire to visit," she said. "It held no nostalgia for me. It wasn't because I didn't believe in the mission or the need for the missiles. But that was a very stressful time in my life.

"The demands placed on missile crews were very intense and the performance standards and consequences for even small mistakes were so high, we were constantly under unbelievable stress to perform," she explained.

Part of the stress crewmembers faced was the acceptance that if there was an attack, they didn't expect to survive. Each missile site was stocked with 30 days of food and water and a diesel generator for emergency power. But crews knew that a missile strike from either side would likely result in attacks on all missile sites.

"Realistically speaking, 30 minutes after an incoming missile launch is detected, every missile site is going to be a smoking hole," Morris said. "That didn't bother me very much because I'd read too much apocalyptic fiction, so I didn't have a lot of hope about what a post-apocalyptic world would be like. Our expectation, or what we hoped for, was we'd live long enough to launch our missiles."

Now, her mission, along with the museum, is to give visitors what she calls "a snapshot" of what it was like for a crew on alert.

Former missile combat crew commanders are available as tour guides each Tuesday. The museum also offers tours by night with its "Moonlight MADness (Mutual Assurance Destruction)" tours. Children can learn how to build and fly balloon rockets on Science Saturdays. And for $1,000, you can spend a night in crew quarters and turn the key in the control room. All of it is designed, not to advocate for either side in the nuclear weapons debate, but to make the museum more accessible to a wider audience and allow visitors to see and touch history.

"Interpreting the role of nuclear weapons in our nation's history is probably one of the most sensitive and polarizing issues from the Cold War," Morris said. "Everyone has very strong feelings about the development and potential use of nuclear weapons, but not everyone has a frame of reference.

"What we hope people take away from their visit to the museum is a frame of reference they can use in the future to make their own decision of where they think the United States should go with its nuclear policy," he said. "The museum doesn't take a position pro or con on the development of nuclear weapons. We try to show people the genie's out of the bottle regarding nuclear weapons, and here's what happened because of it: crews had to be on alert at these sites."

Years have passed since Colonel Mears or Morris were on 24-hour alerts in a missile launch control facility. The memories remain, much like the scent of breakfast and hydraulic fluid. During each tour they give, Mears and Morris take on their newest responsibility in the launch control center, to share some of the memories of their days on alert and teach the role the Titan II played in a peaceful conclusion to the Cold War.

"Former crewmembers here are treated like rock stars," Morris said. "If I'm ever having a bad day, all I have to do is go to the museum and let it slip that I was a crewmember."

STORY BY STAFF SGT. BENNIE J. DAVIS III

MORE THAN SKIN DEEP

photo by Lance Cheung

Staff Sgt. Bennie J. Davis III is a photojournalist with the Defese Media Activity in San Antonio. His photographs are often seen in Airman magazine and on AF.mil.

The best way to understand something is to experience it. I tell this to my three children all the time, but I also explain there are some things that aren't worth the risk. If you have an unquenchable need to know, some things are still worth trying.

It doesn't matter how many times you say, "don't touch it; it will burn you." One day you'll be bandaging your child's blister after an encounter with the stove. The risk was explained, but the curiosity is too great. You learn as you grow.

So as a "wise" adult, why do I find myself standing inside a cordoned off "hot box" about to absorb a blast from the Air Force's "pain ray?" One that gives the effect of your skin burning off? Let me explain.

As a photojournalist for Airman magazine, I relish opportunities to make photographs, travel and experience all the Air Force has to offer.

When the editor asked, "Do you mind being shot by the Active Denial System? You'll get to travel to Albuquerque, N.M.," what was I supposed to say? I'd never been to Albuquerque and had no clue what an ADS was, so in my mind this trip was going to be awesome.

The next step was to recruit a writer and a broadcast journalist. My first stop: the desk of Tech. Sgt. Steve German. The conversation was short, "Wanna get shot by an ADS thing?" I asked. He agreed with the enthusiasm I expected.

After recruiting Airman staff writer Randy Roughton to the team, the mission was a go. Sergeant German was game to try the ADS, Roughton wasn't. He'd done some research.

Fast-forward a few weeks. We're at Kirtland Air Force Base, N.M., with Airmen from the base public affairs office. We followed them to the Air Force Research Laboratory testing grounds. The trip took 20 minutes as we cut through the rocky terrain of the Air Force's sixth largest base.

We were excited to see the ADS mounted on a Humvee ready for our arrival. After a brief overview, we stepped inside and met the ADS director. Inside, we filled out the appropriate paperwork to become official test subjects.

I learned the ADS uses a high-powered beam of electromagnetic millimeter waves that penetrate 1/64 of an inch into the skin. The waves excite the water and fat molecules causing intense pain similar to the way a microwave heats food .

This is where the nervousness set in.

I can't say I was really worried, but this was the first time in my career I'd signed insurance release paperwork attached to a 10-page medical clearance package.

Sergeant German looked at me and I saw the apprehension in his eyes when he asked, "Do you have butterflies in your stomach?"

There was no apprehension in me, I was reassured by the ADS team's knowledge and believed we were in good hands, and besides, there was a doctor on standby.

Back to the hot box. The ADS administrators were awaiting my go for the countdown to "feel the burn." The ADS staff said the initial feeling was like opening a wicked-hot oven door where the heat engulfs your body. To stop the effect all I had to do was run, and I was ready to bolt.

I gave the go ahead and started a mental count down — five, four, three, two — and I could feel it coming. I couldn't hear the beam of energy, but, I swear, my body knew it was on the way. It was like a huge, invisible ocean wave rolling at me. I braced myself as an intense sting hit my skin. The pain wrapped around the front of my body. It felt like I just swam into a pool of angry jellyfish. Before I could think, my feet were already in motion. I was out of the box in seconds, letting out a squeal like a giggly schoolgirl. It was an adrenaline rush, and it was over. The pain was gone as soon I stepped away and my skin immediately cooled. Sergeant German and I exchanged high-fives after the first round.

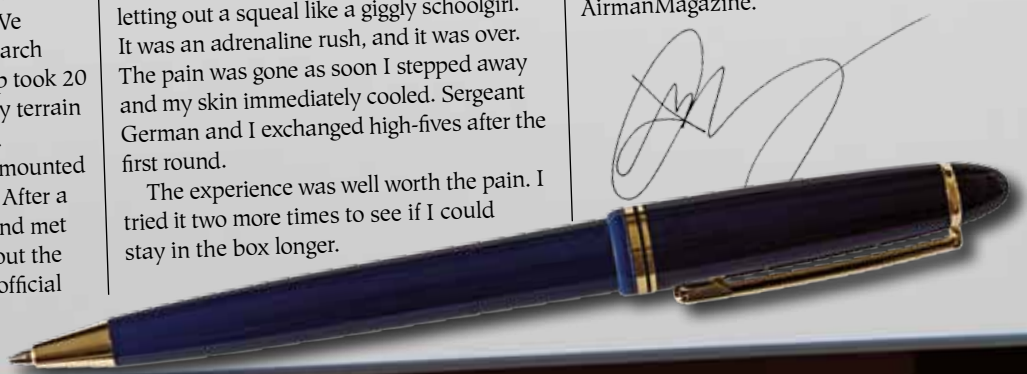
The experience was well worth the pain. I tried it two more times to see if I could stay in the box longer. I was prepared for what was going to happen. No dice, I was out of the box as fast as the first time.

Sergeant German, saved his only ADS experience for a broadcast report for AF.mil; a one shot, one non-kill approach. I ran the video camera. As he came close to the end of his segment, I was to raise my hand to notify the ADS personnel to take their shot with a five-second delay in mind. As usual, Sergeant German was on point during his broadcast. As it came to a close, I gave the signal. I could see the nervousness in Sergeant German's eyes. I watched his body stiffen as he continued his broadcast awaiting the impact. Right on cue at the end of his piece, the "pain ray" struck, sending him running out of the video camera frame; it was hysterical.

Imagine how an enemy would feel not knowing where, or how, the pain is caused; it's a wild concept even when you know it's pointed at you. All I can say is — Fear the Ray.

This is why I love my job. Getting to see and feel the Air Force's advanced technologies firsthand, as well as adding Albuquerque to the list of places I've traveled. I couldn't ask for more.

To see video footage of our "pain ray" experience, visit the Airman magazine page on Facebook at: www.facebook.com/AirmanMagazine.



HURTS ONE. AFFECTS ALL.

PREVENTING SEXUAL ASSAULT IS EVERYONE'S DUTY.

MyDuty.mil

READINESS = RESPECT

THE FINAL FRAME

GUARDING HER AIRSPACE

U.S. Air Force photo by STAFF SGT. JASON HUDDLESTON

STAFF SGT. MICHELLE SALYER, AN AIR TRAFFIC CONTROLLER WITH THE 509TH OPERATIONS SUPPORT SQUADRON AT WHITEMAN AIR FORCE BASE, MO., WORKS THE APPROACH POSITION, ENSURING THE SAFETY OF AIR TRAFFIC IN HER AIRSPACE. APPROACH CONTROLLERS GUIDE AIRCRAFT DURING INSTRUMENT FLIGHT. SERGEANT SALYER IS RESPONSIBLE FOR THE IDENTIFICATION AND LANDING ORDER OF INCOMING AIRCRAFT.