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Technology project at Range G focuses on boundary layer transition testing

By Deidre Ortiz
ATA Public Affairs

Boundary layer transition tests have not occurred in the hypervelocity ballistic Range G facility at AEDC for many years but this is changing as a result of a new technology project.

The purpose of a boundary layer transition test is to measure the location on a model where transition from laminar to turbulent flow occurs.

"These tests can be conducted in wind tunnels, ballistic ranges like the G Range, or in flight," Taylor Swanson, AEDC aerospace engineer in the Test Technology Branch, said.

Swanson explained the current technology project in Range G has two primary purposes: determine a suite of instruments for boundary layer transition tests and gain the experience necessary to conduct such tests.

"An investments branch project is planned as a follow-on to this effort to acquire the specified instrument suite," he said.

In addition to the immediate use of these results for the follow-on project, results will be shared with

See **TECHNOLOGY**, page 4

A technology project is taking place in Range G at AEDC to prepare for advanced hypersonic testing. Pictured here is the inside of the Range G impact and ballistic launch facility. *(AEDC file photo)*

Combined Test Force and Tunnel 9 Continues to make facility the 'go-to place,' site director says

By Deidre Ortiz
ATA Public Affairs

"Tunnel 9 has operated under a Combined Test Force (CTF) construct from day one at AEDC," said Dan Marren, director of the AEDC White Oak, Md., site.

According to Marren, when Tunnel 9 transitioned from the U.S. Navy in 1998, the staff consisted of 100 percent civilians executing all technical and managerial team functions for customers and stakeholders.

"After transition to the U.S. Air Force we lost some good folks and had to backfill with contractors," he said. "This was our first opportunity to function as a CTF. It was not out of desire but necessity.

"On day one we were busy doing critical testing for the DOD (Department of Defense). Our customers could not wait while we figured out organizations and hang charts. We hired based on minimum critical skills and got right to work."

Marren explained that over time employees' unique skills, rather than the company they worked for, came to define the organization around an important mission.

"The company they worked for was less important, and we still today hire based on skills and fill the critical positions with the very best people available regardless of where they came from," he said.

While line functions still occur, Marren said Tunnel 9 customers aren't able to tell who works for what organization.

"Every individual is empowered to help the customer in every way they know how. This is one reason customers love coming here and they tell everyone they know the same."

Being geographically separated also plays a part in personnel roles at Tunnel 9.

"We have teams of comingled civilians and contractors who also comingle functions," Marren said. "What I mean by that is a single test engineer also performs strategic planning and technology development related to high speed systems. A test operator may also be a chief technician on a particular system and is responsible for not only operations but maintenance and investment for that system.

"To take that a step further, each individual involved in test operations may also have several roles in site operations. Since we have to essentially run a mini-base out here, we rely on the expertise of our operations personnel to help keep the site

See **TEST**, page 4

AEDC Paramedic/Firefighter Daniel Harris (center) exits the Kentucky Fire Commission mobile live fire rescue simulation training structure on March 23. Harris, along with 37 AEDC firefighters, participated in the annual training experiencing high temperatures and smoke, and practicing firefighting and self-rescue techniques. *(Photo by Rick Goodfriend)*

AEDC firefighters train for readiness

By Raquel March
ATA Public Affairs

Thirty-eight AEDC firefighters participated in a three-day live fire training March 23-25 at the Complex.

Live fire training is critical for AEDC firefighters to ensure readiness during an emergency either at the Complex or for mutual aid in the surrounding counties.

"Structural firefighting is the heart of our mission to protect the lives, property and mission capability of AEDC," said Chief of AEDC Fire and Emergency Services Daryle Lopes. "We achieve this through prevention, preparedness, and emergency responses. Our preparedness comes from our training. The annual structural live fire event is important because it sharpens basic firefighting skills and builds teamwork under conditions of high heat and added stress."

The training, conducted using the Kentucky Fire Commission mobile live fire rescue training simulator, provides an opportunity for the firefighters to keep response times efficient and their minds sharp.

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In This Issue....

HIGH MACH

Arnold Engineering Development Complex
An Air Force Materiel Command Test Complex

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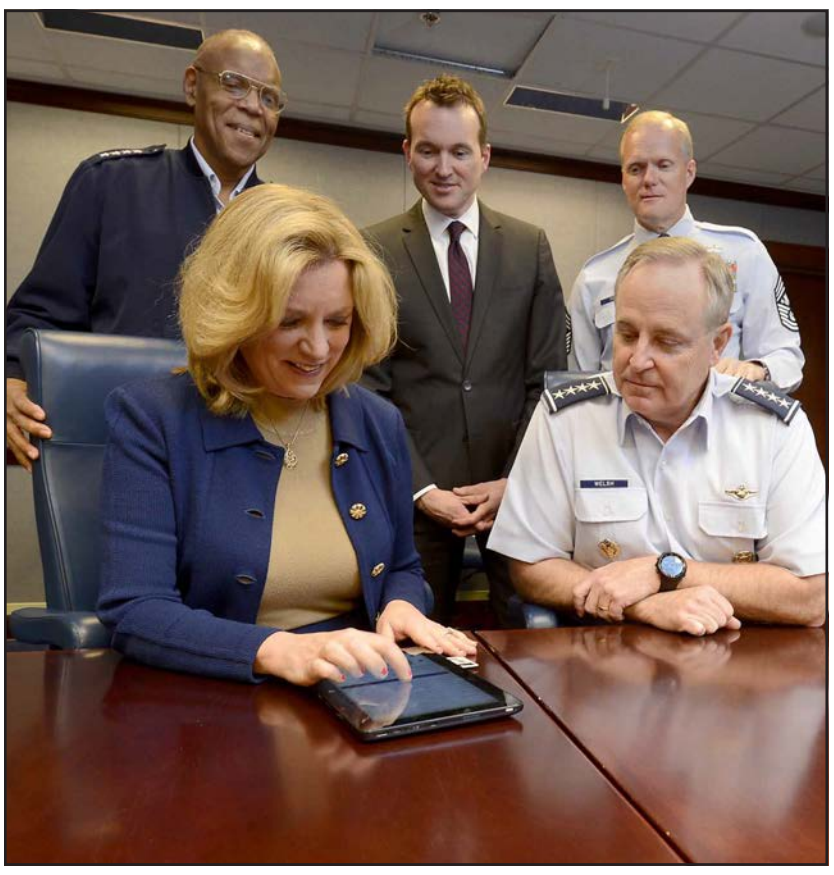
- Deliver professional and technical excellence
- Nurture, enable and treat people fairly
- Align with customer goals and objectives
- Use disciplined and innovative processes
- Continually improve in all that we do

Air Force Assistance Fund Campaign kicks-off at AEDC



Air Force senior leaders review Air Force Assistance Fund affiliate websites while in the Pentagon, during preparation for the 2015 Air Force Assistance Fund Campaign. Seated are Secretary of the Air Force Deborah Lee James and Air Force Chief of Staff Gen. Mark A. Welsh III. Standing from the left to right are Air Force Vice Chief of Staff Gen. Larry O. Spencer, Under Secretary of the Air Force Eric Fanning and Chief Master Sgt. of the Air Force James A. Cody. *(U.S. Air Force photo/Scott M. Ash)*

By Tech. Sgt. Shara Jackson
AEDC Financial Management and Comptroller Division

This year's Air Force Assistance Fund (AFAF) Campaign is March 23 – May 1. All military, active and retired, are encouraged to participate in donating to this charity.

Non-military individuals may participate as well. This year our goal is $1,382. We can exceed this goal!

Only active duty military and military retirees can contribute through payroll deduction. Everyone else will have to give a cash donation (U.S. currency, personal checks, money orders, cashier's checks, and endorsed traveler's checks).

The AFAF is a U.S. Air Force organization that collects donations for four Air Force-affiliated charities. Think of it as the Combined Federal Campaign, except just for the Air Force.

Two of the charities, the Air Force Village and the Air Force Enlisted Village, provide retirement housing for widows and widowers. A third charity, the LeMay Foundation, provides widows and widowers with financial grants of assistance for a variety of needs. Lastly, the Air Force Aid Society provides loans and grants for a variety of things as well, generally falling into three categories: education/tuition, community enhancement and emergency aid.

Tech. Sgt. Shara Jackson

If you would like more information about the AFAF or would like to make a donation, please call 454-6194 or 454-4364. Additional information and donation forms can be found online at ***www.afassistancefund.org*.**

Your support is greatly appreciated.

Preventing sexual assault in the Air Force is our enduring responsibility

By Gen. Larry Spencer
Air Force Vice Chief of Staff

WASHINGTON (AFNS) – As we begin Sexual Assault Awareness and Prevention Month, clear signs point to the progress we have made in combating sexual assault. We can cite encouraging numbers in the areas of prevalence, reporting and convictions; however, this serves as only the beginning of an enduring effort. This effort must continue without pause and we must not lose sight of it for a moment.

Regrettably, in the few short years since we energized our efforts Air Force-wide to prevent sexual assault, echoes about shameful activities and behaviors from our past sometimes still resonate. Most recently, a special interest group criticized the Air Force for an issue involving inappropriate material containing offensive language that was addressed in 2012. Disciplinary action was taken against those involved in the incident.

Any activity that goes against our core values and does not treat our people with dignity and respect is unacceptable and does not represent the culture we expect from all Airmen today and going forward. Every Airman is aware of what the Air Force's expectations are about sexual assault awareness and preventing sexual assault altogether. Leaders and Airmen at every level must foster a climate of mutual respect, dignity and inclusion for all Airmen.

In an effort to ensure the appropriate climate and culture, the Air Force Chief of Staff implemented a Health and Welfare Inspection in 2012. The goal of this inspection was to create a professional environment for all Airmen. This inspection was part of a bigger effort to refocus our force and ensure commanders create and foster healthy and respectful work environments. In this area, we continue to see positive results and steady progress.

For instance, in less than a year's time, the Air Force Office of Special Investigation has focused resources and efforts to reduce the time required to investigate instances of sexual assault from 179 days to a standard of 75 days today. AFOSI also developed advanced sexual assault investigations training and enhanced field evidence processing resources.

Additionally, more progress was made because of Department of Defense Instruction 5505.18. Organizations now initiate investigations on all rape, sexual assault, aggravated and abusive sexual contact allegations. These changes in law and policy resulted in an immediate increase in the number of sexual assault investigations conducted by AFOSI.

Over the past three years, the Air Force has had fewer sexual assault incidents and more victims reporting these crimes. In fact, approximately one in three victims reported crimes in fiscal year 2014 as compared to one in six in fiscal year 2012. Air Force surveys show Airmen are more comfortable coming forward and reporting incidents as an increased focus is placed on care and support for victims. We are going in the right direction, but we still have a lot of work to do.

It is important to note, the Air Force has made significant progress in both its sexual assault prevention and response efforts. Here are some examples since 2011:

- We have reinforced the commander's role as central to preventing and responding to sexual assaults in their unit.
- We have required commanders to be evaluated on their unit's climate assessment and that these results are included in the commander's annual performance report.
- We realigned and restructured the SAPR program by standing up a cross-functional directorate reporting directly to the Vice Chief of Staff which is led by a major general. The directorate includes a 34-person cross-functional team of experts in the Pentagon responsible for policy, operational guidance, force-wide training, and program development; all designed to help us operate an Air Force free from sexual assault.
- The Air Force funded an additional 32 sexual assault response coordinators and 91 full-time victim advocates at installations across the service to strengthen our victim response capabilities.
- The Air Force has reviewed and significantly revised the sexual assault response coordinator's course to cover more content, update old content, and institute adult learning principals so that our SARCs can be more effective in the field. To maintain professional standards, all SARCs and full time victim advocates are now required to be nationally certified.
- The Air Force has trained an additional 75 sexual assault nurse examiners at medical facilities across the Air Force to strengthen our victim response capabilities.
- The Air Force stood-up a Special Victims' Counsel Program that provides an attorney to advocate on behalf of sexual assault victims and enables judge advocates to assert their clients' rights both in and out of court. The special victims' counsel is the first of its kind to provide Airmen and their family members who are victims of sexual assault with their own attorney. Additionally, improved AFOSI training along with establishing the Special Victims' Counsel Program has led to a 90 percent increase in unrestricted reporting, allowing more thorough investigations.
- The Air Force established a special victims' capability comprised of investigators, trial counsel, and victim witness assistance personnel and paralegals with specialized training in the unique dynamics of sexual assault cases. This team of professionals ensures the Air Force is appropriately holding alleged offenders accountable.
- In an effort to foster better synergy and provide better service to our Airmen reporting sexual assault and sexual harassment, in August of 2014, the Secretary of the Air Force directed new initiatives to harmonize our equal opportunity and sexual assault care for commanders and victims.

All of these actions represent significant strides we have made to enhance sexual assault awareness and now sexual assault prevention. Prevention is logically the next phase and only these efforts, when taken seriously at all levels in the Air Force, will further the cultural commitment we place on ensuring lasting change.

We share in common a profession of arms that holds us to a higher degree of commitment to institutional standards. This requires us to make the right choices for both ourselves and our fellow Airmen. Preventing sexual assault requires changing an atmosphere that enables such bad behaviors. This is simply because all Airmen deserve to serve our nation in an environment free from sexual harassment and sexual assault.

Smoking Policy

1. The following revised AEDC smoking policy is effective immediately. Smoking is permitted solely in designated areas identified by a plastic "smoke genie." This receptacle is for the sole purpose of cigarette butt disposal. If there is no receptacle, smoking is not permitted in that area. It is the responsibility of all smokers to clean up the area surrounding the receptacles for any cigarette butts on the ground. Smoking in government-owned vehicles is strictly prohibited. Personnel are allowed to smoke in their personal vehicles at any time. Smoking areas will be held to the absolute minimum and will be located in low traffic, low visibility areas away from points of building ingress/egress and air intakes. A map of all authorized smoking areas is available on the Team AEDC SharePoint site. Smoking near a facility in an area not designated on the map is prohibited and any smoking receptacles located in areas not shown on the map will be removed. All "smoking permitted" and "no smoking" signs will be removed unless specifically required by OSHA.

The fact a person smokes has no bearing on the number of breaks they may take. Breaks should be taken in accordance with the company/agency personnel policies that apply to all employees.

Smoking, including the use of electronic cigarettes and smokeless tobacco, is prohibited in any area, at times when official business is being conducted with government clients, test customers, outside visitors and dignitaries, and where official business is being conducted including conference rooms, auditorium settings, business meetings, or in any other area where Air Force regulations specifically prohibit use. Containers of tobacco waste product, including selaed containers, must not be left unattended or disposed of in trash receptacles. Users of smokeless tobacco must flush tobacco waste down the toilet. Due to the nature, appearance, and safety concerns of electronic cigarettes (also known as "e-cigs"), the use of said products will abide by the same rules for tobacco products stated above and governed by AFI 40-102, *Tobacco Use in the Air Force*.

2. Supervisors at every level will ensure this policy is followed. Disciplinary action is appropriate for repeated violations.

3. Updates to this policy will be made in the future to further align with Air Force guidelines.

4. This policy remains effective until rescinded. (This policy is dated December 20, 2013)

Action Line

Team AEDC

I believe in free and open communications with our Team AEDC employees, and that's why we have the Action Line available. People can use the Action Line to clear up rumors, ask questions, suggest ideas on improvements, enter complaints or get other issues off their chests. They can access the Action Line in one of two ways: via the AEDC intranet home page, and by calling 454-6000.

Although the Action Line is always available, the best and fastest way to get things resolved is by using your chain of command or by contacting the organization directly involved. I encourage everyone to go that route first, then if the situation isn't made right, give us a chance.

Col. Raymond Toth
AEDC Commander

ATA donates to local STEM Program

The ATA Employee and Community Activities Committee (E&CAC) recently made a donation of $1,225 to student learning programs at Huntland School. As part of the Science, Technology, Engineering and Mathematics (STEM) Program for the school's hands-on model building activities, funds will be used to purchase materials for designing and building model bridges. A portion will also go to the school's math departments and the kindergarten's "Brag Tag" program for rewarding positive behavior. Pictured left to right accepting the donation from E&CAC member Andrea Stephens (center) are Huntland School math teachers Brent Davis, Michael Tipps, Sheila Williams and Kim Collins. Teachers not pictured who will also benefit from the donation are Cindy Stovall and Tabitha Puryear. ***(Photo by Matt Walker)***

Maj. Gen. Catherine Chilton visits AEDC

Maj. Gen. Catherine Chilton (right), Air Force Materiel Command Air, Space and Information Operations (AFMC/A3) director, discusses the operation of the Propulsion Wind Tunnel (PWT) Wings Level Yaw (WLY) apparatus with AEDC Senior Acquisition Program Manager Elijah Minter (left) during a tour of the Complex on March 18. The WLY provides quality data and an increased yaw range capability during aerodynamic testing. Dr. Eileen Bjorkman, a member of the Senior Executive Service and AFMC/A3 deputy, is also pictured attending the tour. ***(Photo by Rick Goodfriend)***

Be aware of safe actions

By AEDC Safety, Health and Environmental

Safety Awareness is like almost everything else we do: It is learned, not instinctive. We aren't born with awareness for safety concerns; in fact anyone who has a young toddler or grandchild knows this first hand as they constantly monitor the child to protect him from himself.

We learn through various means. Some learn by doing, some by watching, and some by reading. Others learn by their mistakes or the mistakes of others. This is one reason we talk about near misses and direct hits that we've had here and at other Jacobs sites and locations worldwide.

So, how do you know you've developed good safety awareness? Here are some examples of behaviors that suggest you have good safety awareness:

1. You maintain situational awareness at all times.
2. Before beginning a job, you consider how to do it more safely – JSA/JSR.
3. You make sure you know how and when to use personal protective equipment.
4. You check that your tools are in good working condition.
5. You stay current on your safety training.
6. As you work, you check you position to reduce strain on your body.
7. While you are working, you become aware of any changes in the area – people coming or going, jobs beginning or ending, even weather conditions that could impact the work.
8. You clean as you go and leave the work area in a safe and orderly condition.
9. You start talking with others about safety.
10. You find yourself using the safe habits you learn at work even when doing jobs at home.

Monitor yourself today and see if you've got good safety awareness. If you don't, one of the best ways to gain further awareness is to step back and take a hard look at your or a coworker's actions as they are performing a job. Watch for risky actions. Even more important, watch for safe behavior.

April is Sexual Assault Awareness Month

Summit offers multiple tactics to prevent sexual assault

By 2nd Lt. Esther Willett
Air Force District of Washington Public Affairs

WASHINGTON (AFNS) – Leaders in academia, government, and industry recently presented cutting-edge research related to sexual violence at the Sexual Assault Prevention Summit at Joint Base Andrews, Maryland.

Dr. Andra Tharp, Dr. Gilbert Botvin, and Dr. Dorothy Edwards spoke to 150 Airmen about sexual assault prevention models, as well as strategies to overcome prevention barriers and risk factors through life skills and effective bystander intervention and training.

The speakers represent the many leaders and experts who presented current research and perspectives to participants during the five-day summit designed to engage Airmen of varying ranks and career fields in a conversation about sexual assault in the Air Force.

"Sexual violence is a significant public health problem," said Tharp, a health scientist in the Centers for Disease Control and Prevention's Division of Violence Prevention. "It really does have a ripple effect through individual lives and through an entire community."

According to Tharp, a public health approach to sexual assault prevention includes defining the problem, identifying risk and protective factors, and developing effective strategies to stop sexual violence before it starts.

Sexual violence and related problem behaviors are the result of the complex interaction of risk factors, such as alcohol and drug use, poor decision making, peer pressure and media influence, said Botvin, a Ph.D. at Weill Cornell Medical College.

"There is no single cause of violence," Tharp emphasized. "It's the confluence of risk factors that causes violence."

Edwards, the executive director of Green Dot Etcetera said the external risk factors are compounded by individual barriers to taking action. Every person has their own personal barriers to overcome, such as shyness or fear.

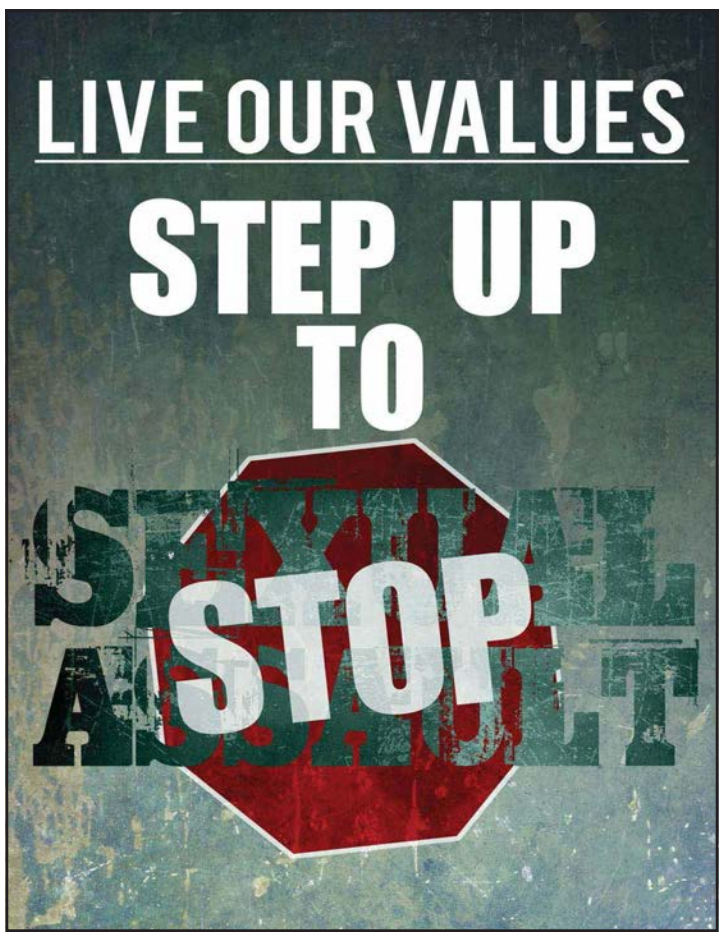
Successful prevention strategies will leverage protective measures, such as emotional health, empathy and connectedness to offset risk factors, Tharp said. Comprehensive approaches will impact individuals to communities for a "surround sound effect."

Botvin expressed that each intervention designed to offset these external and internal risks should be developed to impact attitudes, knowledge and behaviors. The life skills approach decreases vulnerability to risks by bolstering social skills, teaching self-management, and increasing resilience.

"We do not assume that people know how to cope with stress and anxiety, and we provide them with specific skills," Botvin said. "The skills I'm talking about are not taught in any systematic way. All of us kind of blunder through life, learning some of these things if we're lucky."

All the speakers agreed that an effective sexual violence prevention strategy will be multi-faceted. There is no single magic bullet that will work. Consequently, each of these strategies will only be effective if Airmen own the process.

"There is no policy, order or directive that can force an Airman to find some way to step in and do something," Edwards said. "Prevention only works, we're only going to get where we want to be, if we can engage intrinsic motivation."



Anyone needing assistance from a sexual assault victim advocate can call the Arnold Sexual Assault Hotline at 581-7494. The hotline is available 24 hours a day, seven days a week. Calls are confidential.

Throughout the summit, Airmen took the information from each session and applied it in working groups designed to create tools to help the Air Force prevent sexual assault.

As they tackled the significant issue with lots of new information, Airmen were warned against falling into the trap of taking on too much at once.

"Don't sacrifice depth for breadth," Tharp said. "Choose a few key risk factors or a few key approaches and really invest in those to get things started."

(Editor's Note: This is the final story in a series of three in recognition of the 2015 Sexual Assault Prevention Summit.)

FIREFIGHTERS *from page 1*

"We performed four different evolutions during the simulation," said AEDC Paramedic/Firefighter Daniel Harris. "These were fighting a ground floor fire, fighting a basement fire, breaching a wall for building egress and rooftop ventilation. Each evolution was performed in teams of two."

During a simulation, firefighters may experience temperatures up to 500 degrees Fahrenheit and limited visibility due to smoke.

The firefighters are able to practice forcible entry, hose stream application, fire attack above and below ground level and emergency self-rescue techniques.

During live fire training at AEDC on March 23-25, the Kentucky Fire Commission mobile live fire rescue structure shown in this photo was used to simulate real life fire scenarios for AEDC firefighters. ***(Photo by Rick Goodfriend)***

Earth Day Tips of the Day

Ways to Recycle More

Earth Day
U.S. AIR FORCE 2015
Conserve Today. Secure Tomorrow.

There are many things you can do to easily recycle materials you may have been throwing away:

- Many recycling programs don't accept paper cups because of the waxy lining, but the cardboard sleeve can still be recycled.
- Plastic bag and film recycling doesn't only mean grocery bags. Recycle your dry cleaning, newspaper, & bread bags and also the plastic film on products like paper towels. Many grocery stores are a drop off point for these items.
- Don't forget the cap – plastic bottle caps are usually recyclable along with the bottle! Check with your local solid waste & recycling office to be sure, but many recycling programs accept bottle caps, made from #5 and #2 plastics.
- Stop it before it starts – reduce your unwanted mail by unsubscribing via ***https://www.catalogchoice.org***
- Phone it in – charitable organizations like Cell Phones for Soldiers offer free recycling. Any proceeds are used to purchase prepaid international calling cards for troops and provide emergency financial assistance to veterans. Visit ***http://www.cellphonesforsoldiers.com/shippinglabel-generic.php*** for donation information.
- Everything counts! Although you can't recycle your whole pizza box, you can tear off and recycle the top half, as long as it's grease-free. Learn what your community recycling program accepts – from cereal and tissue boxes to magazines and mail – many things we overlook can be recycled.
- Remember to recycle throughout the house! Plastic shampoo bottles and toilet paper rolls can usually be recycled, too.
- Recycling – it's not just for soda cans! Metals are among the most valuable materials in the waste stream and almost all recyclers welcome aluminum and steel.
- What you don't put in your recycling bin is just as important as what you do. Know what's recyclable in your community so you don't contaminate the recycling process. Check with your local recycling and solid waste office for details on your community recycling program, and look up nearby drop-off facilities at ***AmericaRecyclesDay.org/find-recycling*** where you can bring those harder-to-recycle items.
- Buy recycled! Recycling is the first step in the cycle, then the material is processed, and the last step is up to you – keep recycled content products in demand.

TEST *from page 1*

safe, secure and efficient."

Marren stated that in looking to the future, the CTF concept will be largely beneficial to AEDC.

"Col. Timothy West is correct when he talks about 'one team, one fight,'" he said. "When we have the same motivation for excellent results and a desire to get the job done, everybody wins. This structure won't change our operations much since we operate this way today."

Joe Norris, the contractor workforce manager at Tunnel 9, said that "the relationship between the government team and contractor team is very strong and operates in a virtually seamless manner. The CTF structure allows employees to provide the best possible test product to the customer as well as enhance their experience working with AEDC."

Marren added, "I look forward to continuing in the manner that has made Tunnel 9 the go to place in the world for what we do. The freedom to innovate that our folks enjoy comes from the fact that their teammates have their back regardless of team and that they know that the right skills are here for any job needing doing."

This photo shows an example of the Combined Test Force at work at Tunnel 9 in 2005. Pictured are White Oak Technical Director John Lafferty, then Air Force project team leader, and ATA Project Engineer Joseph Norris working together to lead the DARPA HTV-1 test program in Tunnel 9. *(Photo by Chuck Spring)*

TECHNOLOGY *from page 1*

the hypersonic transition community.

Swanson said, "An N factor from the e^N method is an integrated disturbance growth rate. If high N factor transition is achieved, that would be a key accomplishment and selling point for this facility."

As part of the project, testing on cones at hypersonic speeds will be conducted in Range G.

"Cones are a standard geometry similar to others reported in the literature," Swanson said. "Several diagnostics are used to visualize the surrounding flow field, including the laminar or turbulent condition of the boundary layer."

Flow visualization techniques like Schlieren and shadowgraph image density gradients in the flow field allow the test team to see shock waves, vortices and the boundary layer. Infrared cameras determine model surface temperature by viewing thermal radiation emitted by the model. From flow field information and surface temperature, boundary layer transition is determined.

Swanson mentioned that boundary layer transition testing has always been important for any object flying at hypersonic speeds.

"The high heat transfer to the vehicle in the transition region impacts the thermal protection system design," he said.

G Range has a history of hypersonic testing including tests on the Apollo models and the space shuttle. Much of the formative work in the field of boundary layer transition testing was conducted at AEDC by pioneers such as J. Leith Potter, Jack Whitfield and Samuel Pate, among others.

Swanson said he's confident the technology project will be successful in preparing G-range for upcoming testing.

"With the push towards hypersonic vehicles, we anticipate renewed requirement for this capability."

Air Force stands up Task Force Cyber Secure

By Secretary of the Air Force Public Affairs

WASHINGTON, (AFNS) – Chief of Staff of the Air Force General Mark A. Welsh III signed a memorandum on March 20, establishing Task Force Cyber Secure, to address challenges of the cyberspace domain in synchronization, operations and governance within the Air Force and with those organizations it supports.

"This task force is fundamental to understanding the inherent risks within the cyberspace domain and instituting a culture change, in which our Airmen realize the impact cybersecurity has on all the Air Force core missions," Welsh said.

Lt. Gen. Bill Bender, the Secretary of the Air Force chief of information dominance and chief information officer, outlined three main focus areas the task force will be responsible for.

"The task force will diagnose the extent of the cyber threat and the vulnerabilities that currently impact our core missions and will plan to develop a risk management plan that will allow the Air Force to fly, fight and win in a cyber-contested environment," Bender said. "Finally, the task force will recommend investment priorities to the SECAF and CSAF for how best to address the cybersecurity challenges.

"The Air Force focuses the majority of the cybersecurity effort on protecting the information technology we've always protected the last 20 years, but that's only 20 percent of the problem," Bender continued. He envisions a "comprehensive, enterprise-level look at the cyber threat as it relates to everything outside of that 20 percent."

The concepts of mission assurance and cybersecurity were addressed and studied across the Department of Defense and the Air Force across multiple functional lines and major commands. A top priority of Task Force Cyber Secure is to be inclusive of all stakeholders who are working this cyber challenge already and to begin synchronizing and coordinating efforts for securing and mitigating operational risk to the most critical nodes and "centers of gravity."

Pete Kim, the Cyberspace Operations and Warfighting Integration acting director, will lead the daily task force operations and direct an organization that will include cyberspace stakeholders throughout the Air Force.

"Many efforts for securing the core missions in cyberspace are currently distributed across multiple organizations and commands throughout the Air Force," Kim said. "We have great leaders moving out on fixing 'the problem' within their functional areas, but the time is right to look into opportunities to synchronize and maximize resources at the corporate level in order to establish a foundational, consistent enterprise-wide approach in the future."

The task force efforts will inform Air Force strategic planning and programming for fiscal year 2017 and beyond. It will provide a governance plan for Air Force corporate board management and synchronization of cybersecurity investments of the future in the planning, programming, budgeting and execution (PPBE) process. The task force will also integrate multiple efforts and studies, attempting to address cybersecurity across the Air Force, focusing on Air Force core missions and provide a prioritized cybersecurity investment strategy for SECAF and CSAF.

"We're already seeing benefits of a focused task force standing up to address the cybersecurity challenge," Bender said. "At a practical level, sharing information across the Air Force, education on the seriousness of the threat and the vulnerabilities, and connecting the dots are the benefits I'm beginning to see. We are also connecting with academia and commercial industry because we recognize their contributions as significant force multipliers in this domain."

F-35 Lightning II costs drop, report shows

By Terri Moon Cronk
DoD News, Defense Media Activity

WASHINGTON (AFNS) – A recent account of F-35 Lightning II aircraft program costs shows decreases, the Air Force's F-35 program executive officer told reporters in a media roundtable March 24.

Lt. Gen. Christopher C. Bogdan, citing this year's selected acquisition report on the aircraft, called the roundtable to clarify cost and performance facts. He also acknowledged the program has been over budget and is six years late.

"In 2001, we thought we'd be done a long time before now," Bogdan said. But that was before various issues arose, ranging from a security breach to a redesign of one of the F-35 models that was 3,000 pounds over its weight standard.

Changes in 2010

After the 2010 rebaseline took effect, the program took a turn for the better.

"We have not changed a major milestone in this program, not one," the general said.

Bogdan emphasized the importance of looking at where the F-35 program is today and not where it's been. Much of the cost savings in this year's report stem from research, development, test and evaluation (RDT&E), along with procurement and operating and support elements, he said.

As an example, Bogdan mentioned that RDT&E has not seen cost increases in four years.

"The three predominant things that drive (operations and support) costs are manpower, fuel and inflation … (which) can mask any true cost reduction, and that's exactly what happened this year," he said, adding that the report reflected readjusted inflation rates.

Procurement costs also were down $3 billion from last year, partly because of better negotiated costs, he said.

Balancing technical challenges, service needs

"Every program has technical challenges," Bogdan said. "You find things you don't expect and you have to fix (and test) them."

He said the software that handles the mechanics of the aircraft produced challenges for the F-35, especially for mission systems. Bogdan projects the final software to be four to six months behind schedule, "if we don't do anything differently."

When the program was rebaselined, he said, it wasn't known the services – Marine Corps, Air Force and Navy – would set initial operational capability dates. But accommodations were made to get the aircraft to the services on time.

"We have 109 airplanes out there now, and 28,500 hours of flying time," he said.

Overall, the major milestones, aircraft delivery and other commitments did not fundamentally change, Bogdan said, and the F-35's safety is good.

"I wouldn't put anything in the field I myself wouldn't fly," he noted.

This day in espionage history

By AEDC Industrial Security

April 7, 2009 – Quan-Sheng Shu sentenced to 51 months in prison for violating U.S. arms export control law.

April 8, 1996 – John Douglas Charlton sentenced to two years in prison for attempted transfer of defense information.

April 16, 1985 – Aldrich Ames volunteers to KGB (the former Russian secret police and intelligence agency) officers at the USSR (Soviet Union) embassy in Washington D.C.

Keeping our military safe on social media

By Staff Sgt. Amanda Dick
Headquarters Pacific Air Forces Public Affairs

JOINT BASE PEARL HARBOR-HICKAM, Hawaii (AFNS) – Social media. It incorporates several platforms that allow military members to stay in touch with friends and loved ones around the world, however, sometimes what is shared comes with a hefty price tag; loss of operational security.

As seen in recent events, these platforms can also be an instrument for adversaries to target military members and provide an avenue for identity fraud.

According to the Federal Trade Commission, identity theft has been the No. 1 consumer complaint in the last 15 years.

In an independent research study conducted by Next Advisor, 54 percent of social media profiles were the target of identity fraud with another 70 percent of profiles targeted to visit a scam website via private message.

"Using social media is a personal choice, and you have a degree of control over the information you share. Carefully consider how much information you make available and to whom," said Tanya Schusler, the Air Force Public Affairs Agency social media chief. "You need to protect your safety, your career and the Air Force's mission while balancing your need to connect with people. It takes just an extra few seconds to thoroughly consider what you're about to share online, but the consequences of a misstep could follow you for years to come."

Practicing good operational security helps combat risks that arise from using social media, namely by protecting critical information (CI). The Interagency OPSEC Support Staff lists several examples of CI:

- Usernames, passwords, computer and networking information
- Job title, location, salary, grade and clearances
- Operational, security and logistical data
- Social Security numbers, credit card and banking information
- Work/personal addresses and phone numbers

The biggest hurdle on social media is posting information that may not be critical on its own, but when pieced together by someone, on one or more platforms, can have detrimental effects.

According to the study, it was determined that 30 percent of Facebook users do not have their profiles set to private and 14 percent don't know their privacy settings.

There are several ways Airmen can protect themselves on social media:

- When posting, remember "when in doubt, throw it out."
- Take notice of security settings: Are you hard to find/access? Each social network platform has security settings, but Airmen should not solely rely on those settings and should make their profiles as secure as possible.
- Disable location-based social media, or geotagging: this alerts others to your exact location and could inadvertently reveal more information than should be out there.
- Do not post work or personal schedules or travel itineraries: this is especially true if the travel is related to deployments. Posting this information could give adversaries information on troop locations and movements.
- Be aware of backgrounds in photos: sensitive or classified information could inadvertently be in the photo. The background could also give clues as to where you are and what you are doing.
- Do not post information on casualties in your unit: the Air Force has a procedure in place to properly and respectfully notify next of kin in case of injury or death.
- And again, remember "when in doubt, throw it out."

Local PMI branch announces Body Language and Leadership Workshop

By Doug Brown
Project Management Institute

The local Project Management Institute (PMI) branch is conducting a Body Language and Leadership Workshop at the University of Tennessee Space Institute (UTSI) on April 30.

Dr. Donna Van Natten, known as the Body Language Dr., will lead the two hour program. The cost for the workshop is $35.

Van Natten is the founder, president and CEO of Accountability Measures, LLC of Chattanooga, Tenn. She synthesizes her education, knowledge and expertise into high-octane, interactive, educational and fun body language and leadership workshops that provide new insights and tools about human behaviors for all professions, ages and stages of life.

Van Natten's professional memberships include the Chattanooga Women's Leadership Institute, Women in Technology and Women Mean Business. She also serves on the board for Autism and Behavioral Services. In graduate school, she was awarded a Japan Fulbright Scholarship and is published in *The Journal of Leadership Education*.

To register, send a check payable to SMTB PMI and postmarked by April 27 to 1035 Franklin Heights Dr., Winchester, TN 37398

For more information, email ***vp_smt_branch@chattanoogapmi.org***.

Dr. Donna Van Natten

Global strike teams test second Minuteman III missile

Members of the 576th Flight Test Squadron monitor an operational test launch of an unarmed Minuteman III missile March 27, at Vandenberg Air Force Base, Calif. The intercontinental ballistic missile test launch program demonstrates the operational credibility of the Minuteman III and ensures the United States' ability to maintain a strong, credible nuclear deterrent as a key element of U.S. national security and the security of U.S. allies and partners. *(U.S. Air Force photo/Michael Peterson)*

An unarmed Minuteman III intercontinental ballistic missile (ICBM) accelerates toward a test range near Guam, March 27, after launching from Vandenberg Air Force Base, Calif. The ICBM was the second fired for testing and evaluation purposes in the course of a week, with both Malmstrom and F. E. Warren AFBs sending crews and randomly selected missiles to Vandenberg AFB. *(U.S. Air Force photo/Joe Davila)*

By Air Force Global Strike Command Public Affairs

VANDENBERG AIR FORCE BASE, Calif. (AFNS) – An Air Force Global Strike Command team launched an unarmed Minuteman III intercontinental ballistic missile (ICBM) equipped with a test reentry vehicle March 27 at 3:53 a.m. Pacific Daylight Time, from Vandenberg Air Force Base.

The test reentry vehicle impacted in a pre-established test area in the Pacific Ocean near the island of Guam, approximately 40 minutes after launch.

All test launches verify the accuracy and reliability of the ICBM weapon system, providing valuable data to ensure a safe, secure and effective nuclear deterrent.

The launch team, under the direction of the 576th Flight Test Squadron at Vandenberg AFB, included Airmen from the 341st Missile Wing at Malmstrom AFB, Montana, and was the second test launch of a Minuteman III during the week. The 576th Flight Test Squadron and 90th Missile Wing, at F.E. Warren AFB, Wyoming, completed the first unarmed Minuteman III launch of the week from Vandenberg AFB on March 23.

"An operational test launch requires hard work, months of preparation, and outstanding teamwork between personnel on both bases," said Lt. Col. Daniel Hays, the 341st Missile Wing Task Force commander. "These launches are a visible reminder to both our adversaries and our allies of the readiness and capability of the Minuteman III weapon system, and without the dedication of the men and women from both the 576th and the 341st, this test could not have happened."

"The two launches from the past week were a full team effort between the 576th, and the 90th and 341st Missile Wings," said Col. Kelvin Townsend, the 576th Flight Test Squadron commander. "Launching multiple missiles in close proximity to each other adds an extra amount of realism to the operational test mission we fulfill here. These test launches occur due to the training and strict attention to detail our people have, which resulted in a reliable test."

Malmstrom and Warren AFBs are two of three missile bases with crew members standing alert 24/7 year-round, overseeing the nation's ICBM alert forces.

The ICBM community, including the Department of Defense, the Department of Energy, and U.S. Strategic Command will use the data collected from this mission for continuing force development evaluation.

The ICBM test launch program demonstrates the operational credibility of the Minuteman III and ensures the United States' ability to maintain a strong, credible nuclear deterrent as a key element of U.S. national security and the security of U.S. allies and partners.

9th-generation GPS satellite blasts off from 'The Cape'

By 45th Space Wing Public Affairs

CAPE CANAVERAL AIR FORCE STATION, Fla. (AFNS) – The 45th Space Wing supported the successful launch of a United Launch Alliance (ULA) Delta IV rocket carrying the Air Force's ninth Block IIF-9 navigation satellite for the GPS March 25, from Launch Complex 37.

This launch marks the 29th Delta IV launch and the 57th operational GPS satellite to launch on a ULA or heritage launch vehicle. Delta IV has delivered numerous satellites for the National Reconnaissance Office (NRO), as well as GPS satellites for the Air Force and weather satellites for NASA, according to a ULA media release.

"I'm elated with today's successful launch, the GPS constellation remains healthy, strong and robust; and in over 20 years since initial operational capability, GPS has never failed to deliver on its global positioning, navigation and timing commitments," said Brig. Gen. Cooley, the director of the Space and Missile Systems Center's GPS Directorate.

"Each new generation of GPS satellites provides enhanced capability over the prior generations, and has delivered reliable performance demonstrating our commitment that GPS remain the gold standard space-based positioning, navigation and timing service for the future," he said. "Thanks to the men and women of SMC, the 45th, 50th, 310th Space Wings, Boeing, United Launch Alliance, the Aerospace Corporation, GPS IIF and Delta IV launch teams, the GPS IIF program continues to meet GPS enterprise needs."

Created by the Department of Defense to enhance military warfighting capability, GPS is available for use, free of charge, to anyone with a GPS receiver. U.S. and allied military forces use GPS devices in virtually every system to improve their capabilities and effectiveness while reducing risk to their forces and non-combatants. From finance to farming, use by the civilian community continues to grow rapidly and new commercial applications are continuously being developed.

The GPS IIF system brings next-generation performance to the constellation. The GPS IIF vehicle is critical to national security and sustaining GPS constellation availability for global, civil, commercial and defense applications. Besides sustaining the GPS constellation, IIF features more capability and improved mission performance.

A United Launch Alliance Delta IV rocket launches the GPS IIF-9 satellite for the Air Force March 25, from Cape Canaveral Air Force Station's Space Launch Complex-37. ***(Courtesy photo/ULA)***

T-X, future T-38 jet replacement, requirements released

By Capt. Jason Smith
Air Education and Training Command Public Affairs

JOINT BASE SAN ANTONIO-RANDOLPH, Texas (AFNS) – Air Force officials released requirements for the T-X trainer aircraft family of systems that will replace the T-38 Talon, March 20.

The release is the first under the service's new 'Bending the Cost Curve' initiative and follows Secretary of the Air Force Deborah Lee James' emphasis on increased dialogue with industry to build affordability into the acquisition process.

"The industry dialogue will help guide Air Force evaluation of threshold and objective requirements, producing better informed cost-capability decisions," James said.

"The T-X requirements are being released approximately 10 months earlier than under the normal acquisition process and is part of an ongoing effort for more deliberate and open engagement with industry," said Brig. Gen. Dawn Dunlop, the director of plans, programs and requirements at Air Education and Training Command.

The initial draft requirements were released in 2012, allowing industry to make more informed, early design decisions, Dunlop said. Ultimately, the collaboration will shape a more capable and affordable pilot training system for the Air Force.

The T-38 is no longer a practical trainer to prepare Air Force pilots for newer, more advanced aircraft, Dunlop said. Currently, 12 of 18 advanced pilot training tasks can't be completed with the T-38, relying on fighter and bomber formal training units to complete the training at a much greater cost.

"Cockpit and sensor management are fundamentally different today in 4th- and 5th-generation aircraft than it was when the T-38 was built in 1961," Dunlop said. "While the T-38 has been upgraded to a glass cockpit, the inability to upgrade the T-38's performance and simulated sensor capability presents a growing challenge each year to effectively teach the critical skills essential to today's military pilots."

A second issue for the T-38, according to Dunlop, is aircraft sustainment. The T-38s assigned to AETC have not met the command's requirement for 75-percent availability since 2011, meaning many are not mission capable and unavailable for training.

The T-X requirements identify three key performance characteristics for the advanced pilot training mission: sustained G, simulator visual acuity and performance, and aircraft sustainment. While there are just over 100 requirements in all, these were the most critical to ensure the T-X Family of Systems closes training gaps and creates strategic agility for the future.

Pilots practice touch-and-go maneuvers in a T-38 Talon during training at Sheppard Air Force Base, Texas. The Talon is a two-seat, twin-engine supersonic jet trainer used to train pilots in the international Euro-NATO Joint Pilot Training Program. The pilots are assigned to the 80th Flying Training Wing. ***(U.S. Air Force photo/Danny Webb)***

A highlight in the requirements is embedded training with synthetic sensors and data link. Significant progress has been made the past decade in synthetic training that very closely approximates the real system. Currently, nine partner air forces already have advanced pilot training systems that take advantage of these increased capabilities.

The Air Force plans to award a contract for 350 T-Xs to replace the 431 AETC T-38s in the fall of 2017, with initial operational capability by the end of 2023. The service will accept proposals for currently fielded and clean-sheet designs to meet the Air Force's undergraduate pilot and introduction to fighter fundamentals training needs.

One requirement not part of the release is for the T-X to serve in a "red air" or adversary role, during live-fly exercises. The fiscal year 2016 budget includes approximately $40 million across the Future Year Defense Plan in Stores-Aircraft Interface funds as a wedge to provide future planning or development options related to T-X.

"The money for the Stores-Aircraft Interface project should be considered separately from the Advanced Replacement T-X program," said Gen. Robin Rand, the commander of AETC. "A T-X variant is just one option for red air if we decide there's a requirement for it."

The requirements released March 20 were shaped by cross-talks between major command leaders, program office discussions and partner buy-in, Rand said.

"The T-X offers the right capabilities to train our Air Force pilots well into the future," Rand continued. "It's designed to meet our nation's needs, reduce inefficiencies, and increase effectiveness while keeping the cost as low as possible."

Luke 1 flies first 'student' F-35 sortie

By Staff Sgt. Luther Mitchell Jr.
56th Fighter Wing Public Affairs

LUKE AIR FORCE BASE, Ariz. – The 56th Fighter Wing officially began training new F-35 pilots today when the first student, Brigadier General Scott Pleus, 56th Fighter Wing commander, flew the wing's first training sortie.

Luke has a long and storied history of training fighter pilots. Advanced flight training in the AT-6 began at Luke in 1941 and by 1944 pilots at Luke had achieved one million hours of flying time. That legacy will continue with the F-35, an unprecedented fifth generation fighter combining stealth technology with fighter speed and agility, fully integrated sensors and network enabled operations, and state-of-the-art avionics. Luke's operators and maintainers will continue to generate local F-35 sorties. The 56th FW will continue to build the pilot and maintainer cadre and complete training systems preparations for the start of formal training with our international partners in May.

On Jan. 23 Pleus flew his last sortie in an F-16 Fighting Falcon. It represented a personal milestone for Pleus and also a step forward for the Airmen at Luke in realizing its new mission – training the world's greatest F-35 and F-16 fighter pilots.

The first official class of student pilots is scheduled to begin at the Academic Training Center, a 145,000-square-foot two story state-of-the-art training center, May 4. Pleus will complete his training and join the cadre of instructor pilots training that first class of students.

The 61st Fighter Squadron is the first squadron in the 56th Fighter Wing scheduled to accomplish F-35 flying training for future F-35 instructor, operational and test pilots. It will train partner nation and follow-on U.S. Air Force pilots thereafter.

"Just over a year ago, the squadron moved into a new building, stood up new facilities and developed processes required for operating a fighter squadron and integrating into the 56th Fighter Wing," said Lt Col Michael Ebner, 61st Fighter Squadron commander. "Our 23 instructor pilots are honing instructional skills while exercising all the aircraft capabilities and our maintenance professionals continue to refine training processes and convert maintainers from all over the Air Force into F-35 experts."

Luke's F-35 program hit the ground running when the first F-35 arrived at Luke March 10, 2014 and in the coming weeks will reach the 1,000th F-35 sortie milestone.

Pleus's very first F-16 flight was in a 61st Fighter Squadron jet assigned to the 56th Fighter Wing, when the wing was assigned to MacDill, Air Force Base in Tampa, Fla. Ironically, his first F-35 flight is in a 61st Fighter Squadron jet assigned to the 56th Fighter Wing here at Luke.

"This is another step forward for Luke, the 56th Fighter Wing, and our Air Force," Pleus said. "The F-35 is going to be the backbone of the Air Force's fighter fleet for decades to come and Luke will play a vital role in producing the world's greatest, most lethal F-35 pilots. It's important that I complete my flying training here with our Airmen, in our airspace, so I could help refine and validate our program meeting the needs of our Air Force. With IOC scheduled to occur late next year, it's important that we get our training program and process dialed in and as efficient and refined as our F-16 training program is so we can help meet the Air Force's scheduled goal."

Pleus also reflected on the years of work that have gone into the F-35 program and putting Luke in position to begin training in May.

"We're about to fly our one thousandth F-35 sortie at Luke and my flight today was just one of those. Getting to this point hasn't just been accomplished over the past few months. It's really been done over the last few years. Lots of amazing Airmen who have already departed from Luke are the reason we are where we are with the F-35 program. What they did back then to set the base up is the reason why we will be so successful training the world's greatest F-35 pilots. I've got to say that I'm absolutely honored to fly the F-35. But the fact that I got to have my first flight again in the 61st Fighter Squadron really brings this full circle for me." Pleus said.

There are 20 F-35s assigned at Luke, two of which belong to the Royal Australian Air Force, an F-35 pilot training, partner nation.

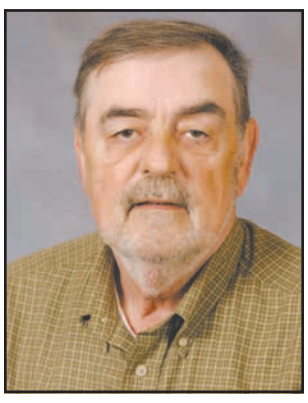
Milestones

J.T. Northcutt

Roy Carroll

40 YEARS
J.T. Northcutt, ATA

35 YEARS
Charles Cardwell, ATA
Roy Carroll, ATA
Karen Medley, ATA
William Milam, ATA



Charles Cardwell
35 years, Engineering Technician VI
ATA Integrated Test and Evaluation Department

What is your most memorable AEDC moment during your years of service?

"The first contract split in 1981 and not knowing what was going to be the outcome; and the variety of projects and people during my 35 years."

30 YEARS
Lynn Armer, AF
Gary Clower, ATA
Troy Davis, ATA
Timothy Emerton, ATA

Karen Medley
35 years, Material Coordinator
ATA Performance Management Department

What is your most memorable AEDC moment during your years of service?

"The great people I have met and worked with, meeting my husband (Phil), and the J5 Rebuild Program – for the large number of requisitions that were processed at a time when everything was on paper."

Rodger Ford, ATA
Roger Miller, ATA
Denis Nisbett, ATA
Michael Reep, ATA
Joel Shaver, ATA

25 YEARS
Wayne Mitchell, ATA
Jared Smith, ATA
Harold Turrentine Jr., ATA

20 YEARS
Bryan Petty, ATA
Mitchell Swafford, ATA

15 YEARS
Christopher Mears, ATA
Bradley McNeese, ATA

10 YEARS
David Brown, ATA
Phillip Buckner, ATA
John Jenkins, ATA
Kenneth Robinson, ATA
Lutrell Stuart, ATA
Austin Voorhes, ATA
James Wiser, ATA

5 YEARS
Hammick Fuqua Jr., Premiere
Charles Lee Jr., ATA

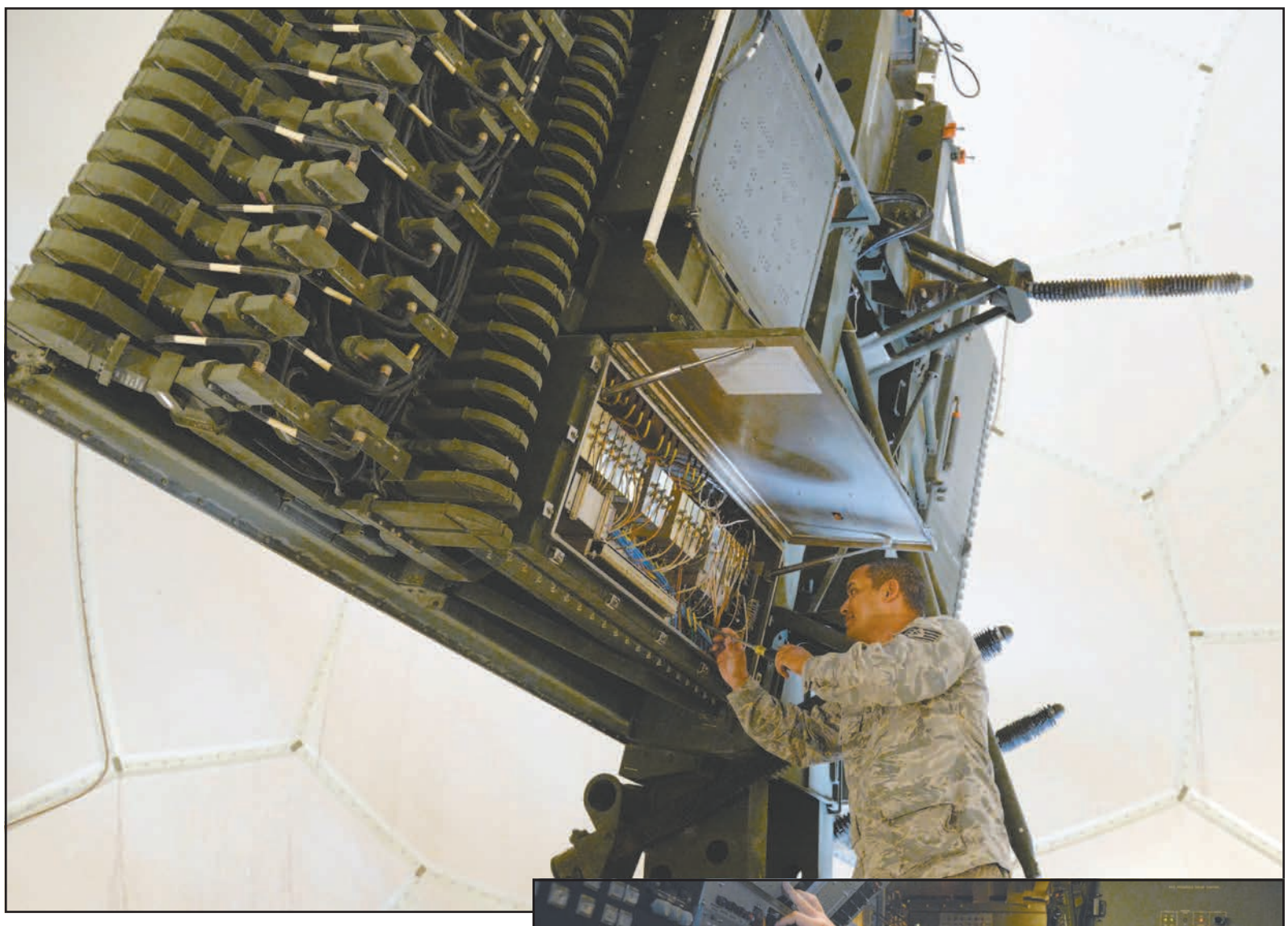
RETIREMENTS
James McCullough, ATA

NEW HIRES
Shannon Allen, AF
Ryan Bailey, ATA
Drew Barnett, ATA
Teddy Beddingfield, ATA
Alvydas Civinskas, ATA
Edward Crenshaw, AF
Jennifer Doan, ATA
Lorenzo Gregory, ATA
Bryce Hoefer, ATA
Terry Jones, ATA
Micah Layne, ATA
Nathan Lister, AF
William Mount, ATA
David Mull, ATA
Dustin Nash, ATA
Brian Panter, ATA
Jarvis Powell, ATA
Joshua Schmitt-Matzen, ATA
Michael Shank, ATA
Barbara Stewart, AF
Douglas St. John, ATA
Benjamin Vandermark, ATA
Wesley Williams, ATA
Paul Wright, AF
David Yoder, AF

PROMOTIONS
Ryan Allen, ATA
Richard Bagley, ATA
Walter Bishop IV, ATA
Joshua Blair, ATA
Thomas Bowlen, ATA
Christopher Bowman, ATA
Brett Boylston, ATA
Judy Brewer, ATA
Mark Brown, ATA
Angela Campbell, ATA
William Castleman, ATA
Wesley Cothran, ATA
Donald Coulson Jr., ATA
Daniel Crews, ATA
Kristen Deardorff, ATA
Michael Dingwall, ATA
Brandon Dorman, ATA
Dawn Goodwin, ATA
Gary Hammock II, ATA
Jeremy Hill, ATA
Brandon Johnson, ATA
Dexter King Jr., ATA
Carla King, ATA
Michael Mason, ATA
Lori McIntosh, ATA
2nd Lt. Kyle Monsma to first lieutenant
Adam Moon, ATA
Lt. Col. Colin Morris to colonel
James Murr, ATA
Joel Nalin, ATA
Paul Ritter, ATA
Ashley Russell, ATA
Phillip Sherrill, ATA
Kathryn Stephens, ATA
John Thomison, ATA
Dusty Vaughn, ATA
Jacob Weller, ATA
Troy Wetherholt, ATA
Bernard Williamson III, ATA
Daniel Zielinski, ATA

Piecing together the bigger picture

By Tech. Sgt. Marie Brown
U.S. Air Forces Central Command Public Affairs



Staff Sgt. Pedro conducts a performance maintenance inspection on the antenna low-noise amplifier March 24, at an undisclosed location in Southwest Asia. Radar maintenance technicians ensure serviceability and functionality of equipment in support of the mission. Pedro is a radar maintenance technician currently deployed from the Air National Guard's 141st Air Control Squadron out of Ramey Air Force Base, Puerto Rico. ***(U.S. Air Force photo/ Tech. Sgt. Marie Brown)***

Staff Sgt. Wilfredo verifies the parameters and enters weather daily values on a TPS-75 radar system to accurately calculate the target altitude at an undisclosed location in Southwest Asia March 24. The TPS-75 radars assist in providing air coverage and support to the Expeditionary Air Control Squadron's current mission. Wilfredo is a radar maintenance technician currently deployed from the Air National Guard's 141st Air Control Squadron out of Ramey Air Force Base, Puerto Rico. ***(U.S. Air Force photo/Tech. Sgt. Marie Brown)***

SOUTHWEST ASIA – Many people balk at the idea of assembling a 1,000 piece puzzle. Imagine performing this task daily, except the puzzle pieces are actually the aircraft tasked with projecting airpower, saving lives and carrying critical supplies throughout the theater.

Airmen with the Expeditionary Air Control Squadron (EACS), also known as "Kingpin," provide the information needed for completion of the Air Tasking Order, a 24-hour planning document that assigns specific aircraft to specific missions.

"We provide 24/7 operational and tactical command and control capability for U.S. Air Forces Central Command in support of ongoing operations including Freedom's Sentinel, Operation Inherent Resolve (OIR) and the Combined Defense of the Arabian Gulf," said Lt. Col. Ryan, the commander of EACS. "So left to right, we provide command and control across the area of responsibility, covering 876,000 square miles along with our airborne command and control platforms."

It takes a unique team to put these pieces together and contribute to the successful mission of the EACS.

"We are a very unique squadron, a total force unit of active duty and Air National Guard, a joint force with U.S. Air Force, Army with a requirement for Marines, and coalition force, as we have the Royal Australian Air Force and the British Royal Air Force all rolled into one," Ryan said.

One piece of this puzzle is maintenance, which repairs and maintains the radios and radars needed to provide the command and control.

"Our job is to maintain the TPS-75 radars so they can provide air coverage and support to our current mission," said Master Sgt. Jose, the radar shop supervisor, currently deployed from the Air National Guard's 141st Air Control Squadron, Ramey Air Force Base, Puerto Rico. "We make sure the radars are operational so the operators at the Battlespace Command and Control Center-Theater can perform their duties."

Another piece of this larger puzzle features the surveillance technicians.

"My job is to detect, track and identify throughout three AOR's to properly communicate with aircraft to confirm their identity and intention," said Senior Airman Isaac, a command and control battlefield manager surveillance technician. "If any tracks of interest pop up, we will push it up and get eyes on it as soon as we can."

It is vital for the service members working in the BC3-T to communicate and direct aircraft in the skies.

"Without Kingpin, a lot of aircraft would be running into each other," Isaac said. "It would be a bad day."

With so many issues happening at once, it takes a special kind of person to be able to direct the aircraft where they need to go.

"You need to be able to remain calm and work under pressure," said Isaac who is currently deployed from Spangdahlem Air Base, Germany. "The more you stress out or freak out, the worse it is going to get for you and everybody else around you."

This calm demeanor and professionalism has been key to Kingpin's ability to provide command and control for nearly 300 U.S. and coalition aircraft in support of OIR, Resolute Support mission and Freedom's Sentinel on a daily basis. During this Kingpin team's deployment, they have tripled the air space they control, which now expands across the CENTCOM AOR. They also support the Afghanistan Resolute Support mission and stood up the OIR Iraq and Syria mission.

"It has been very busy," Ryan said. "We started off with just the Arabian Gulf and then expanded out from there."

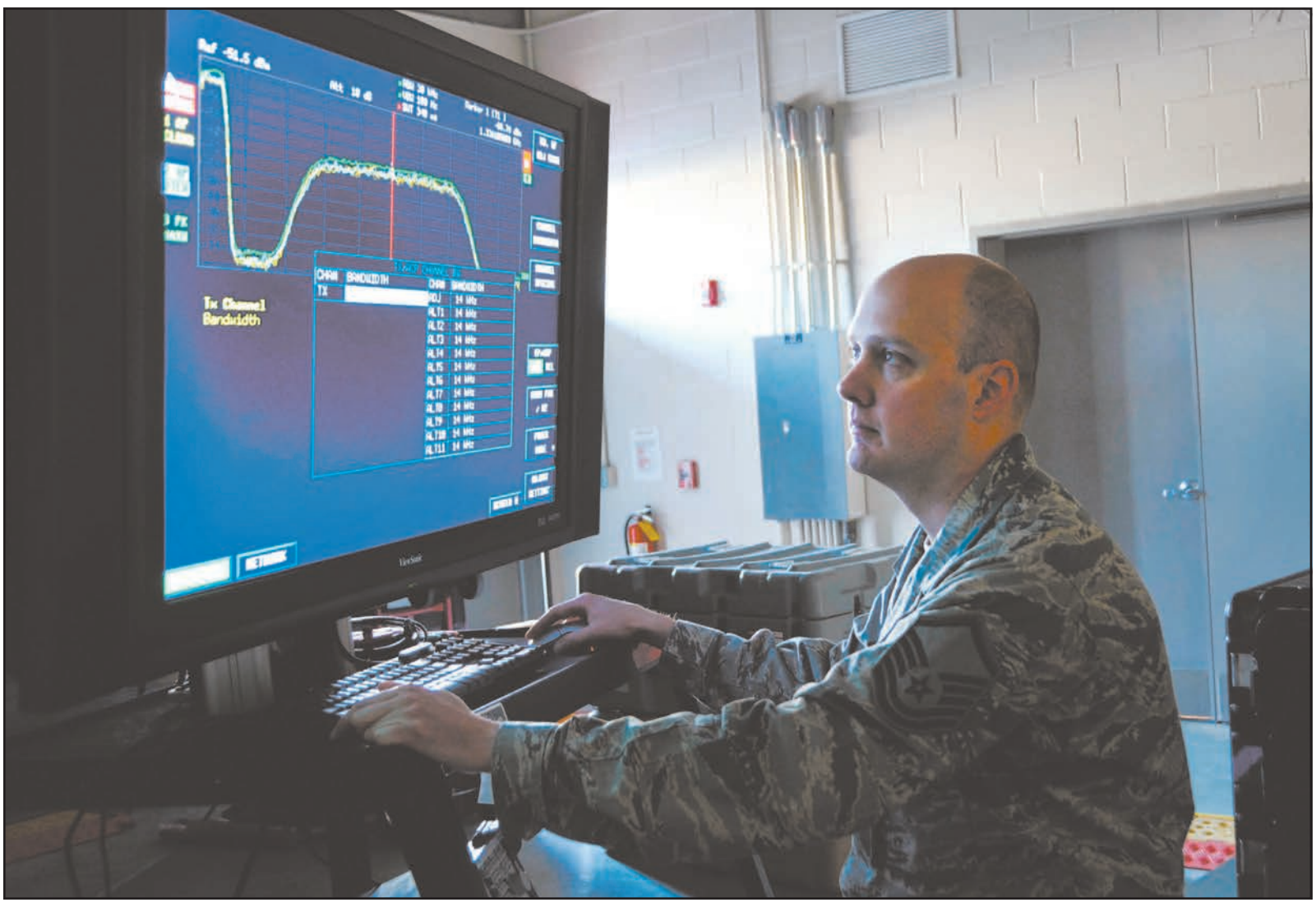
The success of the EACS can be credited to the teamwork displayed by each and every member. The EACS is unique in that they own everything from maintenance of the equipment all the way through the execution of their mission.

"We are one big family," Ryan said. "Without maintenance to maintain the radios and radars, we can't see the aircraft, weapons directors can't see or talk to their assigned aircraft, surveillance technicians can't identify the aircraft, and battle managers can't direct the aircraft to execute the mission that it is tasked with by the Combined Air Operations Center. We can't get the job done without everyone. It's amazing to see all the pieces work together so well."

(Editor's note: Last names and unit designators were removed due to safety and security reasons.)

Joint communication training creates realistic scenarios, cost savings

By Master Sgt. Patricia F. Moran
North Carolina National Guard



Master Sgt. Carl Champagne disrupts adversary's communications by using spectrum monitoring tools during a simulated satellite communications electronic attack exercise April 11, in New London, N.C. Champagne is a telecommunications specialist for the 263rd Combat Communication Squadron. The 263rd CBCS hosted more than 50 active-duty, Reserve and National Guard Airmen during the joint training exercise. *(U.S. Air National Guard photo/Master Sgt. Patricia F. Moran)*

NEW LONDON, N.C. (AFNS) – "Train like we fight" and "Do more with less" are mottos echoing the walls of countless Defense Department and Air Force conference rooms daily; and for good reason.

U.S. military missions continue to expand while concurrently trying to balance shrinking budgets and decreasing personnel.

During his April 2014 Air Force Association Air and Space Conference speech, Gen. John Hyten, then vice commander of Air Force Space Command said, "Whatever you can do to come up with solutions that really do save us money and provide additional capability across the Air Force, we're all for it"

The recent partnership between the North Carolina Air National Guard's 263rd Combat Communications Squadron and Air Combat Command's 527th Space Aggressor Squadron, and their Reserve counterpart, the 26th SAS, represent this vision in action. They are an example of using innovation to tie limited resources together through a total force integration relationship and build mission capability and capacity for the joint force.

The 263rd CBCS, located at North Carolina Air National Guard base provides tactical secure and unsecure voice and data communications systems in support of deployed warfighters and in support of civil authorities for state disaster response. Reliable communication is the life-blood of any crisis, natural disaster or conflict, and the unit has actively and diligently sought advanced training opportunities with the 527th SAS to ensure mission success.

As a geographically separated squadron located at Schriever Air Force Base, Colorado, the 527th SAS fully embodies the aggressor concept. That concept provides training audiences enemy-like scenarios to realistically replicate adversary threats. The space aggressors enable training audiences to develop new tactics, techniques and procedures (TTP) to counter threats and improve U.S. joint warfighting communication capabilities, specifically by providing satellite communication electronic attack replication.

Using boxing as an example, the 263rd CBCS is the boxer preparing for a fight, while the aggressors represent the sparring partner.

"We hit them in practice, to make sure they can take a punch, stand up and hit back in combat," said Maj. Christopher Fernengel, an operations officer assigned to the 527th SAS.

In addition to being rivals in training, these innovative units are partnering to build a stronger future force while simultaneously executing fiscal dexterity.

Between October 2014 and January 2015, the space aggressors deployed to North Carolina to support nearly 37,000 Sailors, Marines and Airmen during three U.S. Strategic Command and Navy exercises. Rather than spending tens of thousands of dollars in shipping costs to transport electronic attack training equipment, the 527th SAS repurposed standard combat communications equipment to replicate electronic attack to support the training exercises. Meanwhile, the 263rd CBCS Airmen provided technical expertise and manpower in support of the space aggressor mission.

"The relationship between our unit and the 527th advances total force integration, makes great fiscal sense and has significantly increased our ability to provide reliable communications to the warfighter in a contested environment," said Lt. Col. Anthony Sullins, the commander of the 263rd CBCS.

The commonality of equipment between the 527th SAS and 263rd CBCS provides many advantages that enhance the missions of both units. The space aggressors save on transportation costs and personnel hours by leveraging combat communications equipment and personnel. The Air Force guardsmen of the 263rd CBCS can leverage training opportunities to remain proficient on their mission tasks prior to real world deployments. The advanced training provided by the 527th SAS allows combat communication operators to develop TTP and mitigation strategies through electro-magnetic interference "dogfight" exercises.

The combined efforts of both squadrons resulted in nearly $62,000 in total savings of travel and personnel associated costs. Such a partnership answers the charge from the ACC commander that challenges Airmen to think creatively and develop innovative solutions to near term shortfalls.

In fiscal year 2015, the support relationship between all three units is expected to be executed four times, providing the DOD an estimated savings of $250,000.

"This total force effort will culminate by arming over 50,000 joint personnel with training and TTP development to fight in and through a contested environment during combat," Fernengel said.

A significant benefit of the partnership, which can't be measured in cost savings, is how the 263rd CBCS becomes better prepared to fight in a contested, degraded and operationally limited environment. The aggressors also learn more about critical communications and ensure vulnerabilities are identified, exploited and mitigation tactics are developed.

"Over the last year, we, along with our combat communications group, have worked with the 527th to integrate more combat (communication) units into this training and codify our lessons into community wide TTPs that are regularly exercised and trained," Sullins said. "Until technical solutions to mitigate jamming are integrated into our equipment, we will use these TTPs to ensure combat communicators mitigate this threat at the tactical edge of our networks."