

Team conducts first test on a reusable space plane

By Philip Lorenz III
Technical Writer

When an expensive and critically-needed U.S. satellite abruptly stops functioning, a replacement is urgently needed. People may assume there is a quick fix.

But the real answer is no, according to Dr. Richard Roberts, 716th Test Squadron project manager for flight systems and aerodynamics. He said there is no way to currently conduct a quick launch of a fully reusable spacecraft, even an unmanned one, to replace a disabled satellite or put a payload into space.

The Air Force Research Laboratory (AFRL) worked with an AEDC team at the von Kármán Gas Dynamics Facility (VKF) Supersonic Wind Tunnel A recently to conduct the first aerodynamic effects test on a Fully Reusable Access to Space Technology (FAST) proof-of-concept launch vehicle.

Dr. Roberts said his team put the FAST launch vehicle through a complex quick flip turn known in aerospace parlance as a rocketback maneuver.

"The primary objective of the test was to obtain jet interaction data to characterize the aerodynamics of

the rocketback maneuver," he explained. "This reusable launch vehicle could be used to transport an expendable upper stage to put equipment into orbit and then it would do a quick flip turn to come back the way it came, returning to the launch site.

"The purpose of this vehicle and its rocketback capability is to allow shorter turn-around times between flights," he continued. "You can get it up there, flip it around and send it back where it came from and then, within a few days, you refuel, re-equip it and send it back up to space rather than having to ship it across country from an alternate landing site.

"To date, NASA's space shuttle is the closest we have come to this capability, which involves considerable operational expenses and a long time to turn-around the vehicle for the next flight."

Currently, all other booster systems are entirely expendable and require long lead times prior to launch.

AFRL is pursuing the Reusable Booster System (RBS) concept as the potential next step for a low-cost access to space capability. Development of the rock-



A 4-percent model of the Fully-Reusable Access to Space Technology proof-of-concept launch vehicle underwent aerodynamic testing in VKF's Supersonic Wind Tunnel A. (Photo by David Housch)

etback capability for RBS could result in reduced cost per flight by reducing required vehicle turnaround time.

After the vehicle is launched, the rocketback maneuver is completed to return the vehicle to the launch site where it can be turned around within 48 hours. After turnaround is complete, the vehicle can be

prepared for launch in under eight hours. This time table is greatly reduced compared to the time required to complete these tasks after shipping the vehicle across the country from an alternative landing site.

Dr. Roberts said the test of this capability involved the use of a 4-percent scale model of the concept vehicle.

"We used high pressure air to simulate the exhaust coming out of it and we tested extreme angles of attack, 90 degrees plus some, and actually flew this thing backwards in the tunnel," he said.

Dr. Roberts acknowledged the test posed some hurdles the team had to overcome.

"The high pressure air is

always the big challenge because we don't do it a whole lot, even though we just did two tests [with a similar maneuver] back to back," he said. "[We have the additional challenge of] keeping that equipment ready to use and staff trained on it. The physics involved are complex and we're also dealing

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Discovering AEDC

Bill Lock, AEDC Chemical Laboratory technical director, is filmed in the lab Dec. 21 by Chris Mitchell and watched by producer Rudy Fischmann, both with Jupiter Entertainment, a production company filming segments for the Discovery Channel's *HowStuffWorks: Whiskey*. Fischmann was using the footage filmed at AEDC to build a bridge between the ethanol found in the popular spirit and that used to power early rocket and jet engines. Lock explained and demonstrated some of ethanol's properties before the crew headed out to the AEDC Fuel Farm for some stock footage of the fuel storage area. Ethanol hasn't been used for testing at Arnold but has become a common commercial fuel additive, and has some laboratory uses according to Lock. (Photo by Rick Goodfriend)

AEDC test videos to join the ranks of YouTube

By Joel Fortner
Public Affairs Director

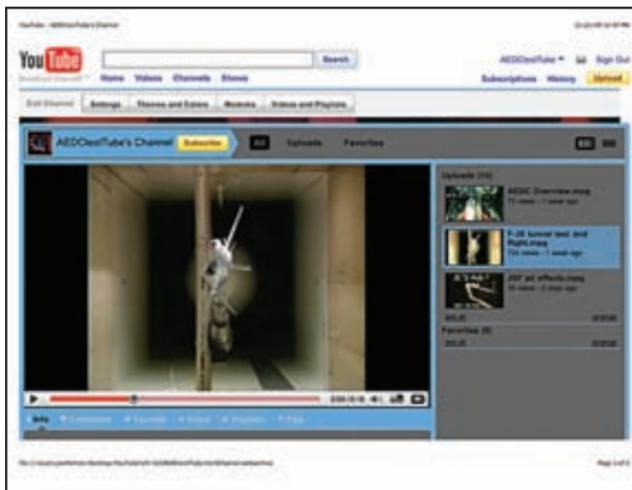
AEDC recently launched a YouTube channel to showcase various systems tested at the center, including the F-35 and F-22 fighter jets and NASA Ares.

The AEDC channel can be found at www.youtube.com/user/aedctesttube.

The Department of Defense is using social media Web sites like YouTube, Twitter and Facebook to communicate with the public at a level never available until recent years.

To date, the most popular video on AEDCtesttube is the F-35 wind tunnel clip, which is one of the most followed aerospace systems in the world presently.

An Air Force Materiel Com-



AEDC launched a YouTube channel to showcase various systems tested at the center, including the F-35 and F-22 fighter jets. (Courtesy photo)

mand test center, AEDC is ground test complex in the the largest and most advanced world.

Woods to be lowered for ramp repair in February

By Janaé Daniels
High Mach Editor

Beginning Feb. 1, Woods Reservoir water levels will be lowered two feet to make repairs to the Morris Ferry Dock boat ramp and to replace the current docks.

The lower water level should be achieved by Feb. 15 when work is scheduled to begin. The boat ramp construction should take about four to six weeks, weather permitting.

According to Ed Coppinger, assistant chief of the Tennessee Wildlife Resource Agency (TWRA) engineering division, the old ramp which is 28-feet wide, will be removed and a new one of a similar length will be built in the same location but extending further into the lake, permitting launch at lower lake levels or for larger boats.

The public access ramp and docks located on Arnold AFB's Woods Reservoir are managed and maintained by the TWRA.

While the water-level is lowered, the two current wooden piers will be removed and one new 8-by-20-foot floating courtesy dock will be installed.

The courtesy dock is to be bid out and should be in place by the end of March.

Coppinger said if additional work is needed on the parking lot, crews will do what is necessary to improve it.

"The ramp construction should positively affect anyone who launches a boat on Woods Reservoir," Coppinger said. "Fishermen, recreational boaters, waterfowl hunters, etc., will be able to launch their boats at any normal lake level without hanging their trailer in a hole or off the end of the broken ramp."

Public Affairs announces release of photo database

By Janaé Daniels
High Mach Editor

A searchable photo database is now available for AEDC employees to find and download cleared for public release photos.

The database allows employees a chance to search for photos for briefings, presentations, etc., and to be able to download it instantly.

"The new photo database is a great tool for those of us who prepare presentations at conferences and other public forums," Bob Walker, 804th Maintenance Squadron technical director, said. "Prior to this tool, a presenter had to schedule a photographer, go out into the field, take photos, develop them and spend time

processing them for public release. Now, within minutes, the presenter can find photos related to mission, facilities or personnel performing a myriad of AEDC tasks."

The database is available on Team AEDC's Community Web site that's accessible to AEDC personnel.

Walker gives a piece of advice when downloading, users should copy and paste, not cut, the photo and not the thumbnail.

To locate the database, log onto to the Team AEDC Community Web site. Under the Summary Links tab, scroll down to AEDC Community Links. Click on AEDC Visual Information—on the left under the Documents tab click on *AEDC Public Released Photos*.

HIGH MACH

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An Air Force Materiel Command Test Center

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Vision

"ATA will be a trusted partner in delivering best value warfighter support and assert stewardship to AEDC"

Core Values

- Be accountable for our own actions
- Ensure the safety of individuals and equipment
- Demonstrate the highest integrity and ethical standards
- Communicate clearly and openly
- 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



Core Values

- Integrity first
- Service before self
- Excellence in all we do

2010: This is the year for a call to arms

By Col. Michael Panarisi
AEDC Commander



Panarisi

For centuries, battles have begun with a "call to arms," the beating of drums, or sounding of bugles. Even in modern warfare, we initiate our efforts with some kind of undeniable "start."

It's in our constitution ("the Congress shall have power to declare war"). The declaration matters to us. Maybe it's wrapped up in the human psyche, but we somehow need to acknowledge things are about to change, and make that first step count.

Even our sporting events start with a gunshot, coin toss or other significant indi-

cator that the game is "on." In some ways, a new year provides this spark.

With 2009 "in the books" and arguably the best ever in our history, 2010 offers us a fresh start in so many ways. A new "decade."

A "reset" on many of the things we look at for clues that things aren't going according to plan. New teammates are on board. Fresh ideas from our "back in the saddle" activity. There's just something energizing about the new year, and we need to focus this new energy on the challenges ahead.

Right off the bat, we're kicking off our "war on waste" campaign. Nothing is off the table. While we will always wrestle with external pressures that tie our hands and keep some of our best ideas out of reach, I'm all for a "re-attack" and looking at how we can run over, through or around those obstacles.

"This is so much more than a job.' Part of what makes this place special is the untiring motivation to accomplish things that establish new boundaries, break down old walls and literally show the world what good of American ingenuity can do."

I'm not talking about breaking laws or violating instructions. I'm talking about finding ways to convince those who may not understand our mission that we have safety nets they might not have thought about when they set "the rules."

I'm planning to send forward "the mother of all waiver packages" if that's what it takes to get us mov-

ing forward. But we have to work inside the walls while that process drags on. That's OK. We're in this for the long haul.

ing forward. But we have to work inside the walls while that process drags on. That's OK. We're in this for the long haul.

We need your ideas now more than ever. "We've always done it this way" is a bankrupt strategy. I know you have a better way on your mind. Let's dig it out, think through it and see what

really what "back in the saddle" was all about. Recognizing that it takes commitment to keep our heads in the game, and keep enough awareness available to see when our teammates might need a boost.

We have a special bond here. This is so much more than "a job." Part of what makes this place special is

the untiring motivation to accomplish things that establish new boundaries, break down old walls and literally show the world what good ol' American ingenuity can do. Seeing this happen all around us makes us part of something special. Fires me up every day. Hear the hum of 16T? The rumble of the G-range? Is that a rocket blast in J-6? Sparks are flying in the model shop, the arcs are spewing flames, and there's a roar from the J-cells. That's the sound of FREEDOM baby! And we know this isn't easy. That's why we came here.

The tough stuff doesn't phase us. The impossible? Well, that might take a little longer. Don't tell us it can't be done. We've been proving that wrong for 50-plus years. Time to do it again in 2010.

I'm thrilled to share this new year with you. So many fantastic efforts are either underway or kicking off. Together, we will make 2009 "one of the best years" as we crush it by what we do in 2010. LET'S GO!!

Civilian work force to transition to General Schedule

By Tom Sizemore
Civilian Personnel Director



Sizemore

The National Defense Authorization Act for fiscal year (FY) 2010, signed by the President Oct. 28, included a provision repealing the National Security Personnel System (NSPS) and directs the transition of employees out of NSPS by Jan. 1, 2012.

This is not surprising news as NSPS has been the most widely publicized, discussed, debated and perhaps even the most controversial personnel system most of us have ever experienced in the federal service.

Over the past three years we have implemented and maintained dual personnel systems. Supervisors, managers and employees put significant time and effort into learning the NSPS Human Resource elements, authorities, hiring flexibilities as well as the classification architecture of career groups, pay bands and pay schedules. We planned, implemented and transitioned to a successful performance pay system.

Throughout the DoD, the initial transition to a pay for performance system was not

no new NSPS certificates will be issued.

We now approach the end of our third performance cycle under NSPS. Since specific timelines and full guidance has not been received, we will continue as if there will be a forth performance cycle.

Supervisors and employees will continue to jointly write job objectives; jointly establish performance goals and expectations that are aligned with mission-related goals; and jointly participate in feedback sessions.

The DoD goal is to efficiently and transparently transition out of NSPS. As we prepare for this transition we should not lose the focus and perspective on the value of performance that many have learned as employees and supervisors under a pay for performance system.

The one aspect of NSPS that stands out is the documented performance plan. Under NSPS, the performance plan and entire performance cycle is outlined and documented in an automated Performance Appraisal Application (PAA).

This online performance plan enables employees to provide a written self-assessment to each job objective during the interim and annual assessments. Likewise, supervisors respond with written assessments which reinforce and document the communication process.

Regardless of the automation feature that tracks and documents the performance cycle, feedback should always be conducted through a meaningful discussion with open and honest communication between the supervisor and employee.

A pay for performance system has driven home even more the enormous degree to which mutual feedback provides for employee development, improvement and performance.

As we posture for the transition out of NSPS we must keep intact a strong performance evaluation program that will promote employee involvement in the entire process.

Achieving and sustaining exemplary work force performance will always be dependent on each of us knowing and doing what is expected from us and how it

is expected.

Supervisors and employees should always jointly establish goals or objectives and performance standards that are aligned with the organizational and agency values, missions and goals.

Performance feedback will always be a vital part of any performance cycle to provide an assessment of where you are, where you need to be and how to get there. Feedback sessions should always be timely and designed to provide meaningful dialogue between a supervisor and employee to address concerns, clarify expectations or improve on an expected outcome.

Regardless of the performance system in place, a high performance culture is predicated upon everyone working together to establish clear targets and mutual expectations but more importantly, achieved through individual commitment and ownership.

We have faced and solved many challenges within our personnel systems during the past several years. Together, we will meet the challenges that lay ahead!

Col. Michael Panarisi
AEDC Commander

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 three ways: via the AEDC intranet home page, Action Line boxes at the base cafeterias 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.

Question/Concern:

Currently ATA tracks property custodianship in Synergen. When someone leaves, property is reassigned in Synergen to someone else, often without the new custodian being aware they've been assigned additional property until someone comes around to conduct inventory. People are being good and extending themselves to inventory property they are not responsible for in order to keep Synergen happy. Can something be done to improve this process?

Response:

Property transfers are accomplished through an eMatrix property transfer process that allows custodians to request

the transfer of property to other employees and provides an electronic record of the transaction. Proposed new custodians are notified of requested transfers through e-mail alerts. These alerts provide a link to the eMatrix system and instruct the individual to either accept or reject the transfer. If the transfer is accepted, the Synergen property records are updated to reflect the change of custody. If rejected, eMatrix records the refusal, alerts the individual submitting the change of the rejection, and no change in custody occurs.

Under the existing process, the new custodian can receive up to 11 e-mail alerts over a 15 workday period if no action is taken on the request. The final six

alerts are also sent to the employee's supervisor. The last alert tells the new custodian the transfer will occur automatically if no action is taken to either accept or reject the transfer. If no action is taken, the transfer automatically processes and the Synergen property records are updated to reflect the change in custody.

We realize that some may not be familiar with the eMatrix property transfer process. To help those individuals, the Air Force and ATA Property Administrators are revising the eMatrix process and implementing additional measures for Property Administration involvement prior to automatic transfers. In addition to alerting the Air Force Property Administrators

on all transfers involving Air Force employees (CIV, MIL or NAV), all alerts will include instructions on how to accept or reject proposed transfers. To further streamline the process, individuals and their supervisors will only receive e-mail alerts of pending transfers every seven calendar days. A maximum of three alerts will be sent. This will give individuals who are TDY or on leave ample notice before automatic transfer of the property. Automatic transfers involving Air Force employees will be reviewed by the Air Force Property Administrators prior to finalization. These changes will be implemented in the second quarter of this fiscal year.

An additional property

enhancement being implemented during the same time frame will notify AEDC personnel whenever a property item assigned to them changes location or when they are assigned custody of a piece of property. This enhancement will not only improve the property transfer process, but is seen as a proactive approach to help custodians of Government property monitor movement of their property. It will also provide full awareness of any property assigned to them.

Your action line comment has helped to improve the property transfer process and we are sincerely grateful that you brought this important matter to our attention.

Training exercise lends experience for all involved

By **Janaé Daniels**
High Mach Editor

During a force protection training exercise conducted in mid-December, emergency response teams were charged to apprehend an assailant who shot a base entry controller and attempted to bring a vehicle-borne improvised explosive device (IED) onto the installation.

The installation barriers were activated and the assailant was taken down about 100 yards inside the gate.

As depicted in the far right photo, the K-9 team was more

than willing and able to manage the situation.

"We've been very pleased with Bikkel's level of training and preparedness since purchasing him several months ago from Von Liche Kennels," AEDC Chief of Police Rick Trull said.

According to Trull, Bikkel has passed his state and local certifications flawlessly and from the picture and has no problems getting the attention of would-be assailants.

Lt. Charles Cook, Arnold Police Training Officer said, "A K-9 should not distinguish between an exercise and a real world situation.

This dog's seriousness was unquestionable."

Cook said from an evaluator's perspective, with safety always being paramount, it was remarkable to see the team execute their training in concert with each other.

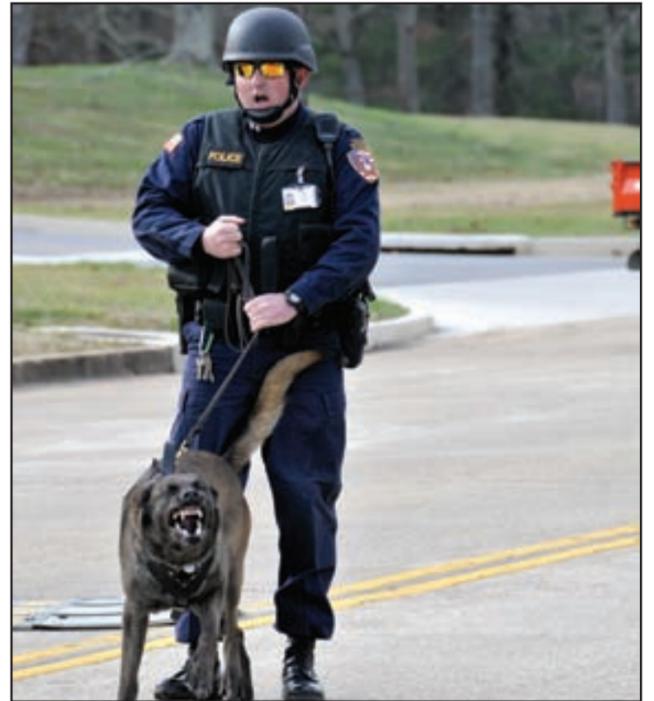
"The dog executed the handler's clear and concise commands with little or no hesitation, while the handler maintained not only situational awareness for the scenario, but the safety of all involved."

The primary purpose of the exercise was to determine the installation's effectiveness in responding to a domestic terrorist threat utilizing

all force protection assets on base.

According to Bob Stanze, AEDC's director of Security Forces, "The ATA defenders really stepped up to the plate and executed their mission in an exceptional manner during the two day long AEDC FPCON exercise. I was especially

impressed with the "can-do" attitude, hustle and professionalism displayed by each and every ATA officer in response to an extremely robust and demanding set of threat scenario's thrown at them by the AEDC EET [Exercise Evaluation Team]."



Above, Bikkel takes his training seriously as he prepares to help apprehend the "suspect" in a training exercise. Left, AEDC Security Police have the "suspect" surrounded and blocked from incoming and outgoing base traffic. (Photos by Rick Goodfriend)

Johnson reflects on her time at AEDC and her next journey

By **Janaé Daniels**
High Mach Editor

Gloria Johnson, Education and Training technician, is hanging up her AEDC hat later this month and beginning another chapter in her life – retirement.

"I look at my life as seasons and this is a transition, retiring after 20 years of service," she said. "This season is over and I am ready for the next."

Johnson's plan for the next season is to do what she loves to do and that is serving Jesus Christ through ministry and community service. Her husband James is retired from the Air Force and plans to retire from his current position with Alabama A&M Research Institute.

"Our plan is to retire from our jobs and do full-time ministry at the church he pastors in Decherd."

Jokingly, Johnson said her husband will work full-time at the church and she will be his administrative assistant. The Johnsons hope to spend more time with their seven grandchildren and an eighth arriving in March.

The west Tennessee native never planned on a life involved in the military but embraced it as it came.

"From the time I was in high school I always liked science," she said. "I imagined myself being a lab technician or something along that line. I never pictured myself as 'married with children.'"

However, she did marry and has been married for 40 years with biological twin sons and two through guardianship.

Her first opportunity for federal service came when she and her husband were stationed at Royal Air Force (RAF) Bentwaters, England, where she worked at a



Johnson

temporary position with the Department of Defense Dependent Schools (DoDDS), RAF Woodbridge High School, as secretary to the guidance counselor.

Her first permanent position came when they were stationed at Zweibrücken, Germany and she worked for the Department of the Army. When her husband was assigned to the Inspector General team at Norton AFB, Calif., she began her career with the Department of the Air Force.

Johnson started her AEDC career in 1993 as a government civilian when her husband was assigned to the security police flight. After he retired in 1997, they decided to stay in the area.

"Most of my federal career has been at Arnold," she said, "and it has all been in the Personnel Directorate."

As she closes this season of her life,

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and staff trained on it. The physics involved are complex and we're also dealing with the air flow blockage in the tunnel and the mechanics of getting the air to go the way we want it to.

"We try to keep it [the test article] out of the boundary layer as best as we can," he continued. "It is tough flying [the model] at extreme angles while using the high pressure jet simulation and avoiding the flow near the side of the

tunnel, it can be tricky."

ATA Project Engineer John Hopf agreed that the challenges the team faced during the test provided a learning curve for everyone involved.

"We went into the test knowing that a lot of what we were going to try to do wasn't proven," Hopf said.

"In the wind tunnel, we had lots of blockage issues with a large model and the mass flow and running the

test at the edge of the tunnel envelope.

"We approached it as an experiment more than a production wind tunnel test," he added. "We did get quite a bit of good data. I think we can identify any of the questionable data."

Information gleaned from the test will go into AFRL's computational fluid dynamics database and possibly support future wind tunnel testing.

AEDC's Keith Holt knows 'you get what you need'

By Philip Lorenz III
Technical Writer

Walking into Keith Holt's office it's hard to miss the coffee mug emblazoned with a diving symbol or the toy drum set and photos of him playing a gig or skiing out west.

Large story boards showing the latest multi-million dollar technology investment project he is working on line one wall.

However, it's all of the photos of his adopted daughter that clearly take center stage.

Holt, who is the program manager for the Space Threat Assessment Testbed (STAT) at AEDC, joined the work force at Arnold in 1985. During his 25 years at AEDC, he has managed a series of complex ground test support investment projects.

Twenty-eight years ago, Holt, armed with an undergraduate degree in mechanical engineering and a passion for tackling the challenging projects from the ground up, began by working for the commercial sector.

"I built a ready-to-spread frosting plant for Procter and Gamble and a couple of barbecue plants for the Beatrice Corporation," he said with a smile.

After coming to Arnold, his first job was to improve and enhance all the cryogenics and vacuum systems in the Mark I and ELA Space Chamber facilities.

Later, he was the project manager over what was the Decade nuclear effects facility and the construction of a National Missile defense facility in 10V. This was followed by his current role as the program manager overseeing the development of the STAT Spiral 1 test facility and the development of the Mark I test facility's transformation into the STAT Spiral 2 capability at Arnold.

Holt is proud of the role he has played in helping to fulfill Arnold's mission, but personally, his true pride and joy is a little girl named Kasen.

During Holt's 22-year marriage, he and his wife, Karen, had both been on the fence when it came to having children. Then about seven years ago, she told him of her desire to have a baby. Unable to conceive, the couple finally decided to adopt a child.

They had begun a challenging and rewarding journey.

Before deciding to start a family, Keith and Karen had travelled extensively and enjoyed a full life. He said as satisfied as they had been with their lives, both personally and professionally, nothing could have prepared him for the profound satisfaction parenthood would bring.

"I thank the Lord every day that my wife wanted to have chil-



Keith Holt, his wife Karen and their adopted daughter, Kasen, pose for a group photo on the "Red Couch" at the White Swan Hotel, the place where Holt said all families stay when they come through Guangzhou. (Photo provided)

dren," he said. "This is what I was put on earth to do. I have no doubt, if anybody has ever gotten clarity about why they're here; I'm here to rescue and raise two little girls.

"We started this after years of pain, of not being able to conceive," he continued. "I kept telling my wife that we could keep going through this as long as she wanted to."

In 2003, Keith's wife told him that having a child was her goal, not being pregnant and she was open to an adoption. Before long, they decided on an international adoption.

"As old as we are and were when we started the process, we were not very likely to get an infant child, and we wanted to experience the entire process," Holt explained. "With the United States, infant children go to young parents. We also wanted the anonymity of an international adoption."

He also wanted to adopt from a country where there wasn't the likelihood of their adoption case being challenged in court.

The couple had been poring over material sent from adoption agencies all over the world, when something happened to make one country stand out.

"I had a class with Jacobs [Engineering, Corp.] downtown and there were people from all across the country at that class," Holt recalled. "There was a woman there who had just adopted from China and I told her what we were going through to decide and she recommended a couple of books. They were about the lost daughters of China."

In January 2005, the couple got their referral for a baby girl they named Kasen, which included a photo.

"Once we got the referral, there was a face, there was a human being and I wanted to go get her

then," Holt said. "They made us wait a couple more months."

After being fingerprinted what seemed like countless times, the couple finally boarded the flight that would ultimately bring them to China to pick up their little girl.

"It was a wonderful experience," Holt said. "I felt very safe in China. You'd see the military presence there, but I never felt in danger—the people loved us there. The people knew that we were giving a better life to a child, one that would not be afforded there. They all treated us wonderfully."

Keith and Karen went to Jiangxi Province to a city called Nanchang, which is about 800 miles south of Beijing.

"She was 11 months old at the time we got the referral and we knew we were going to miss her first birthday," Holt said. "We sent her a bunch of presents. When they handed her to us, she had all those presents in her arms."

However, they immediately noticed something was clearly wrong with Kasen.

"They had her in four layers of sweat clothes," Holt said. "'Your baby is sick,' they said; she needs cold medicine,' and they gave us some."

It was obvious their newly adopted daughter needed proper medical attention, which their Chinese guide, "Uncle Bruce" arranged.

"[As it] turned out, she had double pneumonia and we spent our first five nights in a Chinese hospital. The conditions there make us appreciate our hospitals here much more," Holt acknowledged.

The threesome spent another week in Guangzhou near China's southern coast to allow Kasen to recover enough for the flight back to the U.S.

"[Overall], it was wonderful, we can't wait to go back," Holt

said. "The process in China has slowed dramatically. We started the process for this second adoption in 2005. We hope, based on watching the progress of those ahead of us that we'll go by at least sometime in 2011. Kasen took less than two years, start to finish."

Holt said Kasen has come a long way since that day in 2005 that they picked up a sick little girl in China.

"We started Kasen in private school when we brought her home at age one," he said. "She

just began kindergarten this past fall, where she flourishes. She makes straight A's, except for one category; She gets an 'I' for 'improving' in 'controls excessive talking.'

"I can't imagine where she gets that from," he continued. "She's a nuclear bundle of energy who enjoys gymnastics, swimming, singing and dancing. She also enjoys spending time with her 10 dogs and three cats (all rescues).

Looking back on the whole adoption process and what preceded it, Holt put the whole experience into perspective.

"After all the pain we went through trying to biologically have a child of our own, and constantly asking 'why us,' we now count our blessings daily that things went the way they did. If things went differently, we wouldn't have Kasen," he acknowledged. "It's obvious with every breath I take that she was meant to be with us.

"To quote one of my favorite British 'philosophers,' Mick Jagger, 'you can't always get what you want, but if you try sometime, you find, you get what you need!'"

To view the story online and see more photos of the Holts with their adopted daughter, go to www.arnold.af.mil. Also, to learn more about the international adoption process check out the Holt's personal Web site at www.keithandkarenholt.com.



Kasen, who is now five years old, enjoys being active, whether its gymnastics or dancing. More recently, she learned how to ski during a trip to Utah. (Photo provided)

Johnson from page 3

Johnson says what she will miss most are the people.

"I will miss my co-workers the most, current and former," she said. "In the past 16 plus years, I have seen most of them more than I have seen some family members. I had the opportunity to work with some great folks at AEDC: civilian, military and contractor.

"As far as I'm concerned, Network Control rules...I was always calling them for something and the staff in graphics did a superb job in helping us decorate our office after the renovation. My relationship with FM [Financial Management] became up-close and personal thanks to PK [Contracting Directorate] and the government purchase card. I was able to do my job because others did theirs. Anyone can look good when they have someone supporting them. Thanks Team AEDC."

Faye Ford, an ATA purchasing agent, buyer and secretary of the Black Awareness Community Coalition (BACC) has known Johnson for years and has served on several committees with the BACC.

"She always wears a smile and is willing to give a helping hand," Ford said.

Jeannie McFaddin, chief of Education and Training, thinks Johnson is a wonderful lady of character who places her priorities in God and family.



Gloria and her husband James pose for a group photo with their children and grandchildren. Above left, starting from the left: James Johnson, Devin, Tina and their little girls Briana and Erica DeLaughter; Susan, Kelli, Dianna and Jonathan, Rachel and Max Johnson; Michaela, Kevin and Gloria Johnson. Pictured in the above right photo are James and Gloria Johnson and Krissy, Tim and Nathaniel DeLaughter. (Photos provided)

"Gloria was the primary person that held the Education & Training Office together during her tenure. Gloria is the best troubleshooter I have ever worked with," McFadden said. "She is a sweetie and loves sharing sweets with her customers and Team DP [Personnel Directorate]. God bless her and her family and I thank

her for her service to God, country and family."

Johnson said she is glad she is retiring and also glad she was at AEDC.

"My whole experience with DoDDS, the Department of the Army and Air Force has been a teaching vehicle for me and it's something I wouldn't have learned by just

taking Microsoft office classes," she said. "I have learned a lot in just working here that I can use after I retire. This has been more than just a paycheck — it's been a sense of satisfaction that I accomplished something and when I go home at the end of the day I feel good about what I've done."

year in review

Another year has come and gone marking the end of the first decade of the 21st century. 2009 brought in many memories for the center and its employees. Here are just a few...



1

1. January: Paul Jalbert, ATA project manager, and Col. James Jolliffe, 704th Test Group commander, hold a certificate of appreciation that was presented by NASA for the work done on the NASA Ares Stage Separation Test in VKF Tunnel A. (Photo by Rick Goodfriend)

2. February: Winter reared its ugly head when six to seven inches of snow fell in the Tullahoma/Manchester area. (Photo by Tom Penfold)

3. April: Dr. Wim Ruyten, a physicist with Euclidean Optics Inc., a subcontractor with ATA, looks back as he departs AEDC on a bicycle for the "Itching for a Cure: Road to Chicago" fundraising challenge, organized by the PSC Partners Seeking a Cure foundation. (Photo by Rick Goodfriend)



2

4. July: Left, Gen. Donald J. Hoffman, AFMC commander, hands the AEDC flag to the 26th AEDC Commander Col. Michael Panarisi. The change of command ceremony was held at the 718th Test Squadron headquarters building July 13. (Photo by David Housch)

5. August: Dr. Stan Powell is presented the 2009 American Institute of Aeronautics and Astronautics (AIAA) ground test award by AIAA President David Thompson. (Photo provided)

6. September: Capt. Brandon Herndon talks with eighth graders at the annual Minds in Motion tour. (Photo by Gary Johnson)

7. November: Center engineers played critical role in Ares 1-X test flight. Joe Syler, ATA outside machinist, makes an adjustment to the Ares I first stage booster model in VKF's Tunnel B prior to the resumption of heat transfer testing. (Photo by David Housch)



3



4



5



7



6

1. January: A group of U.S. Army and NASA officials visited NFAC Jan. 13 to see the NASA/ Army UH-60 Individual Blade Control test in the 40-by-80-foot wind tunnel. Pictured from left to right, Mark Betzina, NFAC deputy director; M. E. Rhett Flater, executive director of American Helicopter Society; Charles W. Hughes, director of Rotorcraft Engineering with Boeing Helicopters; Phillip W. Hodges, associate director for Aviation and Missile Systems, Aviation and Missile Research Development and Engineering Center (AMRDEC), U.S. Army; Barry R. Lakin-smith, acting director of Aeroflightdynamics Directorate, AMRDEC, U.S. Army. (Air Force photo)



1

2. February: Chris Graham, AEDC Fire Department driver/operator observes as Charlie Armstrong, Arnold Engineering Development Center fire fighter crew chief, takes a dropper with a liquid chemical reagent mixed with an unknown substance (powder) and applies the liquid to reactive strips to identify the powder. This was part of an emergency response exercise simulating a terrorist chemical attack. As part of the drill, which was held Jan. 28, an envelope containing white powder and a letter with a message in Arabic was delivered and then opened at the center's Fitness Center. (Photo by Philip Lorenz III)



2

3. March: Scott Bartlett, ATA chief engineer, receives Engineer of Distinction award from Tennessee Tech University.



3

4. April: AEDC officials are heralding a successful first test on the Defense Advanced Research Projects Agency's (DARPA) Falcon Combined Cycle Engine Test (FaCET) in the center's Aerodynamic Propulsion Test Unit (APTU), a major milestone on two fronts. This was also the first customer test since APTU underwent a major multi-year and extensive facility upgrade. (Photo by Rick Goodfriend)



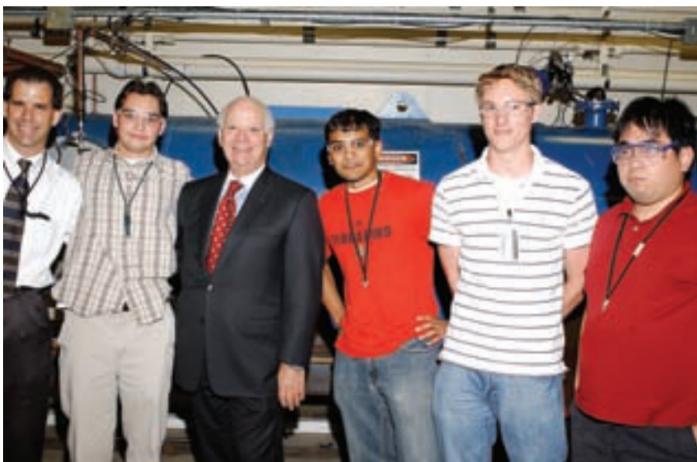
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5. May: A Pratt & Whitney F135 engine for the Conventional Take-Off and Landing (CTOL) version of the F-35 Lighting II Joint Strike Fighter undergoes Proof Testing, as well as augmentor characterization work, in Arnold's SL-3 test cell. (Photo by Rick Goodfriend)



5

7. July: Members of AEDC's Fire Department provide first aid to a simulated shooting victim after a Security Police team "neutralized" a gunman.



6

20





8. August: Col. Eugene Mittuch, new vice commander sees Arnold as great career opportunity.

9. September: Jason Layne, handler and AEDC Detection Unit, K-9, officer, kneels with Bikkel, the new security dog. (Photo by David Housch)



10. October: AEDC's Mark I Space Chamber was the setting for Evening at Arnold, which hosted elementary, middle and high school teachers from three counties and several local communities. (Photo by Rick Goodfriend)

11. November: 'Cultural walk' puts Arnold's past into perspective.

12. December: ATK's CASTOR® 30 was ground tested at AEDC in a specialized vacuum chamber that simulates the altitude at which the upperstage motor will operate. (AEDC photo)

Center photo— Airman Magazine's visit to AEDC to cover activities going on at the center and to recreate a historical photo. (Photo by Lance Chueng)



7

8

Clockwise from the top

A. January: Gregg Beitel, ATA Technology and Analysis branch engineer, shows Air Force Chief Scientist Dr. Werner Dahm some of the instrumentation that has been tested using the J85 engine at the Propulsion Research Facility on the campus of UTSI. (Photo by David Housch)



9

B. June: AEDC Security Police officers provide protective cover for a team of security police first responders as they move down the hall of the second floor of the A&E Building during the initial phase of an active shooter training exercise. The first phase provided emergency response training for the building's occupants. The second phase of the exercise gave the public affairs staff and AEDC's commander some realistic training in timely communication to the base populace and the public. First responders also included a Rural/Metro ambulance and crew from Franklin County. (Photo by Rick Goodfriend)

C. June: Randy Plattenburg, an ATA test engineer, inspects the Orion crew module and launch abort system model during a configuration change between aerodynamic effects test runs on the model in 16T. (Photo by Rick Goodfriend)



10

D. March: Rick McIlmoil and Jose Rosario, NFAC aircraft mechanics, conduct preflight checks of the UH-60 rotor prior to another phase of the Individual Blade Control test in the facility's 40 by 80-foot wind tunnel. (Photo by Jeff Johnson)



11

E. May: AEDC Commander Col. Art Huber presents a commander's coin to Tim Thompson of the Muscogee (Creek) Nation of Oklahoma. (Photo by Rick Goodfriend)

F. January: Col. Gerald Curry spoke at AEDC's annual Dr. Martin Luther King Jr. observance event Jan. 9. His message of service to others and hope resonated for both AEDC personnel and four Air Force ROTC cadets who attended the event. (Photo by David Housch)



12



A

B

C

Team meeting to be held Jan. 12 to rally troops for event

A team meeting will be held Jan. 12 in the large DO conference room from 11 a.m.-noon to rally teams for this year's Relay For Life relay in Manchester April 23-24.

Last year two AEDC teams showed their support and raised more than \$6,300.

"Participation last year far exceeded my wildest dreams," said Dee Wolfe, survivor and AEDC event coordinator. "When I first proposed this idea to the base, I had hoped to garner enough interest to support one team with a goal of \$1,500 in donations. The fact that we, Arnold AFB, supported two teams and raised more than \$6,300 was just amazing.

"This year I hope to have at least two teams, if not more, and to double the donations we turn over to the American Cancer Society," she said.

For more information, contact Dee Wolfe at 454-4313 or by e-mail at dee.wolfe@arnold.af.mil or Shawn Wolfe at 454-6500 or by e-mail at shawn.wolfe@arnold.af.mil.



From left to right is "Helping Others Together" team members Emily Crosier, Brad McNeese, Jessica McNeese with Natalie, Mark Jenkins, Dee and Shawn Wolfe. This was one of two AEDC teams who participated in the event last year. (Photo provided)



Fifteen F-22 Raptors from the 90th Fighter Squadron at Elmendorf AFB, Alaska, are slated to deploy to Andersen AFB, Guam, in January. The deployment supports U.S. Pacific Command's theater security packages in the Western Pacific. (Photo by Senior Airman Cynthia Spalding)

F-22A Raptors to deploy to Guam

Hickam AFB, Hawaii (AFNS) – Fifteen F-22 Raptors are scheduled to deploy to Andersen AFB, Guam, in January 2010 for approximately three months.

The fighters and associated personnel will deploy from the 90th Fighter Squadron at Elmendorf AFB, Alaska.

The deployment supports U.S. Pacific Command's (PACOM) theater security packages in the Western Pacific and follows the recent departure from the theater of two deployed squadrons of F-22s that also were supporting U.S. PACOM's TSP.

The fighters and personnel deployed to Andersen AFB, Guam, and Kadena Air Base, Japan, completed their redeployment in October 2009.

AEDC has done exten-

sive aerodynamic and propulsion ground testing on the F-22 Raptor and F119 engine that powers the aircraft.

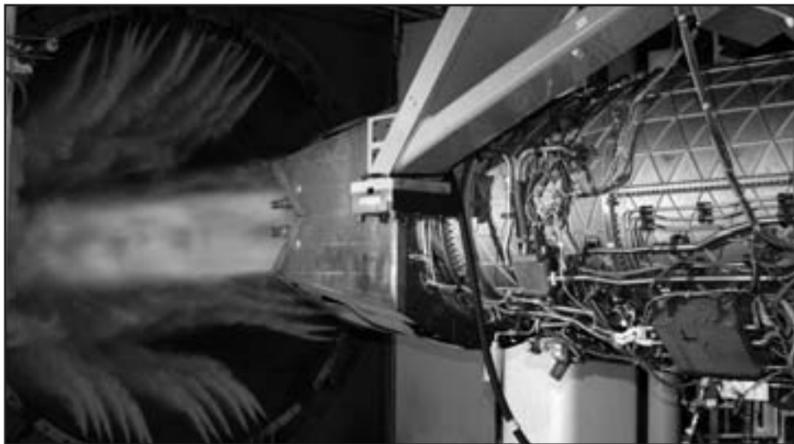
The Raptor is a transformational combat aircraft that can avoid enemy detection, cruises at supersonic speeds, is

highly maneuverable, and provides the joint force an unprecedented level of integrated situational awareness.

As part of continuing force posture adjustments to address worldwide requirements, U.S. officials continue to deploy addi-

tional forces throughout the Western Pacific. This is the latest example of the flexibility U.S. forces have to meet their ongoing commitments and security obligations throughout the Pacific region.

Article courtesy of Air Force News Service.



An F119 engine, the power plant for the F-22A Raptor, undergoes sea level Accelerated Mission Testing (AMT) in SL-2. (Photo by Rick Goodfriend)

AEDC to celebrate Dr. King's birthday



Jamerson

AEDC's work force will have an opportunity to observe and celebrate the birthday of Dr. Martin Luther King Jr., at 8:30 a.m. Jan. 15 in the A&E Lobby.

The guest speaker for the event will be Col. Allen J. Jamerson, who is the 72d Air Base Wing and Installation Commander at Tinker AFB, Okla.

ATA Human Resources Manager Mike Cunningham, who attended last year's observance of Dr. King's birthday, said he also plans to attend the event this year.

Cunningham appreciates Dr. King's legacy of peacefully promoting social justice when it was not popular or safe.

"Great leaders con-

vince people to continue to pursue a vision in the midst of tremendous opposition and despite hardships being inflicted upon them by others who oppose that vision," he said. "Dr. Martin Luther King Jr., along with George Washington and Abraham Lincoln are three Americans who epitomize great leadership. I wish there was a portrait of all three in every school building."

Colonel Jamerson is responsible for a \$261 million operating budget and more than 3,000 personnel providing base operating and direct operational support to the Oklahoma City Air Logistics Center, 552nd Air Control Wing, Navy Strategic Communications Wing One, 3rd Combat Communications Group, 507th Air Refueling Wing and 45 other associate units including the Defense Logistics Agency, Defense Information Systems Agency, Defense Finance and Accounting Service and 38th Engineering Installation Group.



Pratt & Whitney delivers final carrier variant F135 engine

Pratt & Whitney has delivered its final Conventional Take Off and Landing/Carrier Variant (CTOL/CV) F135 flight test engine to the F-35 Joint Program Office, marking another major milestone as the program transitions from System Development and Demonstration to production.

Garry Blaisdell, the Pratt & Whitney site manager at AEDC, said it is important to understand the work that contributed to the delivery of this final F-135 CTOL/CV flight test engine.

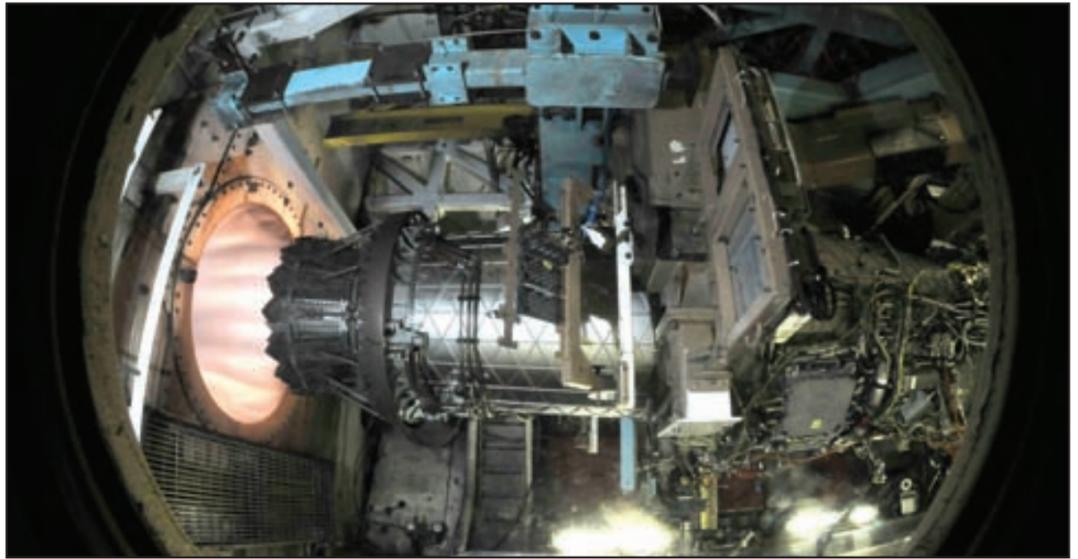
"To date, Pratt & Whitney has conducted more than 3,690 hours of altitude and sea level development and qualification testing at Arnold AFB's ground test facilities," he said. "The F135 engine will continue to be tested at Arnold AFB throughout its service life to continuously improve on its performance and

reliability."

The first F135 test was conducted in AEDC's C-1 engine test cell in November 1998. Since that time, 35 test articles have been evaluated and tested by the team at AEDC, enabling the development and maturation of the fifth generation fighter engine for production deliveries.

Warren Boley, Pratt & Whitney vice president of F135 Engine Programs, spoke highly of everyone who contributed to the program over the years.

"I am tremendously proud of the Pratt & Whitney F135 team who has worked so tirelessly over the last eight years, in partnership with the F-35 Joint Program Office and Lockheed Martin, to get to this significant point in the F135 program," Boley said. "This final CTOL/CV F135 engine delivery is another demonstration of the continued maturing of this



This F-35 Joint Strike Fighter F135 engine, undergoing ground testing in the J-2 test cell, set a record for the longest duration test ever at the test center, logging 52 consecutive hours. (Photo by Rick Goodfriend)

engine program, which has logged more than 12,850 test hours and will begin production engine deliveries later this month."

Pratt & Whitney has delivered 17 flight test engines and expects to deliver the final Short Take Off and

Vertical Landing (STOVL) flight test engine early this year.

"What makes this milestone even more exciting is that it signifies a transition from development activity to production, as we are poised to deliver our

first production CTOL/CV F135 engine within several days of delivering this final CTOL flight test engine," Boley said. "We are proud to continue successfully powering the F-35 Lightning II flight test program, and our eyes

are also trained on the day when our first production F135 CTOL engine will be installed in a production F-35 and delivered to our military men and women."

Compiled from an article by Erin Dick, Pratt & Whitney Military Engines.

AEDC-tested engine hits 100,000 in-service flight hours

East Hartford, Conn.—The Engine Alliance GP7200 engine has achieved another milestone, reaching 100,000 revenue flight hours at the end of December.

Garry Blaisdell, Pratt & Whitney's site manager at AEDC, is proud of the role his team has accomplished with their counterparts at Arnold AFB on the GP7200 engine.

"Pratt & Whitney/GE Alliance conducted altitude certification testing on five different GP7200 test articles within the C-2 altitude test cell, accumulating 225 test hours between 2004 and 2006," he said. "C-2 is the only test facility in the world capable of providing the altitude icing conditions that were required to complete the FAA Icing Certification testing on the GP7200. The one-of-a-kind facilities at Arnold provide

the capability to test and certify critical jet engine systems, like engine anti-ice prior to flight."

Eight GP7200-powered A380s are in service. Emirates began operating the aircraft August 1, 2008 and received its seventh A380 in late December. Air France entered service with the GP7200-powered A380 on Nov. 20. Other GP7200 customers include Korean Air, Etihad Airways, Air Austral and International lease Finance Corporation (ILFC).

The engines have not experienced a single in-flight shutdown since entering service.

"We're very pleased with the engine's performance and reliability in service," Engine Alliance President Mary Ellen Jones said. "It's the result of continuously testing

these engines under extreme conditions to expose potential issues and resolve them before they can become problems. It's also a tremendous tribute to the success of this GE-Pratt & Whitney partnership."

"We're delighted to be one of the main GP7200 operators," Emirates Executive Vice President of Engineering & Operations Adel Al Redha said. "The in-service experience of the engine has proven to be meeting the performance and reliability expectations set by the manufacturers."

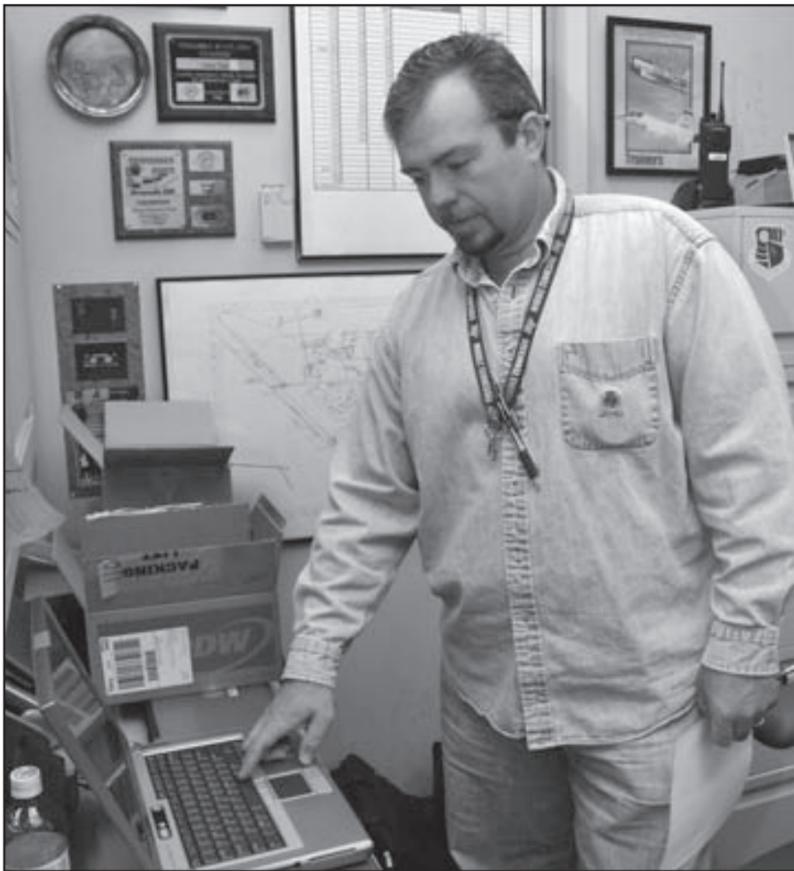
The GP7200 is derived from two successful wide body engine programs, the GE90 and the PW4000. It benefits from the two programs' latest, proven technologies and the lessons learned from more than 25 million flight hours of successful opera-

tion. Certified at 76,500 pounds (340 kN) of thrust, the engine has the capability to produce more than 81,500 pounds (363 kN) of thrust. In addition to being the quietest, most fuel efficient engine for the A380, the GP7200 engine has emissions that are well below current and anticipated regulations.

The GP7200 is manufactured at GE and Pratt & Whitney, with GE manufacturing the high pressure compressor, combustor and high pressure turbine, and Pratt & Whitney manufacturing the fan module, low pressure compressor and low pressure turbine. Final engine assembly is conducted at Pratt & Whitney's Engine Center in Middletown, Conn.

Compiled from a story by Erin Dick, Pratt & Whitney Military Engines.

People @ work



Bryan Jones, an ATA computer network technician, repairs a laptop during his work day. Jones is a Manchester native and has been at AEDC since 1996. (Photo by David Housch)

In Memoriam

Vivian Elaine Morgan, of Tullahoma passed away Jan. 4 at the age of 57.

Morgan worked as an administrative assistant in the Flight Systems Plant Operations at VKF. She was a member of St. Paul the Apostle Catholic Church.

She is preceded in death by her father, John C. Gafford and her step-father, David G. Burns. Morgan is survived by two daughters, Jennifer (Kevin) Black of Tullahoma and Courtney (Aaron) Parker of Man-

chester; her mother and stepfather, Vivian and Robert Warwick of Tullahoma; two brothers, Chris Burns of Seattle, Wash., and David Burns II of Chattanooga, Tenn. and three grandchildren, Ian Black and Abigail and Trace Parker.

For those who wish donations can be made to the American Heart Association.



Morgan

Milestones

45 YEARS
Lynneth Redford, ATA

40 YEARS
Rita Bell, ATA

35 YEARS
Zeldra Jefferson, ATA
Robert Lindeman, ATA

30 YEARS
Jonathan Mansfield, ATA
Ruth Clowers, ATA
Stanley Downs, ATA
Michael Pepple, ATA

25 YEARS
James Reid, ATA
G.V. Wilson, ATA
John Silva, ATA
Earnest Burks, ATA

20 YEARS
Michael Rampy, ATA
Vernon Rogers, ATA
Anthony Duke, ATA
Drew Powell, ATA
Melissa Miller, ATA
Phenillophie Miller, ATA
William Epley, ATA

15 YEARS
Barry Henderson, ATA
George Jenkins, ATA
Christopher Harter, ATA
Lori McIntosh, ATA
Mary Hawkersmith, ATA
Tiffany Hartwig, ATA

10 YEARS
Jeffrey Stevenson, ATA
Stephanie Shetters, ATA
John Nunley, ATA
Corey Rice, ATA
Deborah Wisner, ATA

5 YEARS
Jason Bramblett, ATA



**Bob Lindeman
ATA, 35 years**

Eric Brumley, ATA
Benjamin Boggess, ATA
Bernard Williamson III, ATA

Sayeed Sidiqyar, ATA
Charles Rose, ATA
Melissa Minter, ATA
Michael Dickey, ATA
Marty Land, ATA
Jeff Moss, ATA
Zachary Grosch, ATA
David Ashby, ATA
Dustin Boss, ATA
Ryan Rich, ATA
Adam Webb, ATA

Clarence Rogers, ATA
Carlos Nichols Jr., ATA
Glenn Schmitz, ATA
Carlton Rogers, ATA
Carl McGee, ATA
Jimmy Towry, ATA
Michael Kinslow, ATA
Valerie Davenport, ATA
Wiley Collier Jr., ATA
Ryan Allen, ATA

Chanz Farmer, ATA
Stacey Wimberly, ATA
Natasha Young, ATA
Ronald Meadows, ATA
Michael Nelms, ATA
Matt Reel, ATA
Quinnie Elliott, ATA

Dylan Welch, ATA
Der'lvan Kelly, ATA
Ihsan Ansari, ATA
Douglas Darden, ATA
David Brannon, ATA
Joe Simmons, ATA
Kevin Boyce, ATA
Casey Schewe, ATA
Timothy Taylor, ATA
Melinda Burns, ATA
Daniel Higdon Jr., ATA

INBOUND MILITARY
MSgt Michael Arena, AF
Capt. Ashton Hainge, AF

OUTBOUND MILITARY
Lt. Col. Latheef Ahmed
MSgt Robert Louchery
Maj. Brian Brown
Lt. Col. James Colebank
Lt. Col. Robert Perrin

RETIREMENTS
Sherrie Evans, AF, 32 years
Gary Mattasits, AF, 28 years
Gloria Teal, AF, 33 years
Kathy Moore, AF, 30 years
Gloria Johnson, AF, 30 years
Temple Bowling, AF, 35 years
Maj. James Smith, 20 years
Master Sgt. Bryan Larson, 20 years
Maj. Matthew Laubacher, 20 years
Col. Joel Speight, 25 years
Vivian Hill, ATA, 36 years
Ronald Wyatt, ATA, 14 years

NEW HIRES
Noah Ura, AF
Shanda Myers, AF
Jimmy Malone, AF
Peter Macaluso, AF
Brandon Stiles, AF



GLC now under new management

The Gossick Leadership Center (GLC) recently became part of the Services Division.

Events such as meetings, conferences, luncheons, dinners, etc. may be booked through the Services Conference Center Manager (CCM) up to one year in advance.

Requests must be made in writing by e-mail to arnold.glc@arnold.af.mil. All event

coordinators are required to sign an agreement.

Official unit functions are authorized at no charge and are defined as bona fide official meetings or training held as part of the normal duty day.

Unofficial and private functions may be held for authorized users at a fee. Community members may host events with the approval

of the Services Director for a fee.

Outside food and beverages are not allowed. First consideration must be given to Arnold Lakeside Center. In the event they cannot accommodate, an outside source may be utilized with CCM approval.

For more information contact the CCM at 931-454-3024.

Arnold Golf Course 454-7076

Mulligan's Grill is open seven days a week from 7 a.m.-2 p.m. Try the "Good Morning Breakfast" special Monday through Friday. This includes two eggs, choice of bacon or sausage, hash browns and one biscuit and gravy for \$4.50. Breakfast is served until 10:30 a.m. New lunch specials for January are **Monday:** hot ham and cheese sub, fries and fountain drink for \$6; **Tuesday:** Cranberry walnut chicken salad croissant, fries and fountain drink for \$6; **Wednesday:** turkey club Panini, fries and fountain drink for \$6; **Thursday:** chili cheese dog, fries and fountain drink for \$6; **Friday:** club sandwich, fries and fountain drink for \$6. Try the soup of the day with a sandwich. Mulligan's Grill meals are a great value and include unlimited drink refills. Call ahead for advance or to go orders at 454-7076. Remember to show your Members First Plus membership card for a 10 percent discount on purchases of \$4 or more.

A **new range ball machine** has been installed at Arnold Golf Course. In addition to tokens, a preloaded card can be purchased which will allow use of the range after hours and at a discounted rate. Range lighting is now available for night hitting. Discounts range from 15 to 30 percent depending on the quantity purchased.

Arnold Lakeside Center 454-3350

Arnold Lakeside Center has installed **new television and satellite programming** to offer more football games. Wild Card playoffs will be in The Landing Jan. 9 and 10. Times are still to be determined by NFL. Divisional playoffs are coming Jan. 16 and 17 with times still to be determined. Championship playoffs will be Jan. 24. Super Bowl Party will be Feb. 7 with the big game on the big screen. During these games, buy one get one free on any 12-inch pizza or 25 cent wings (dine in only). Take-out pizza orders during game time are \$2 off.

Pizza & Chili Wednesdays. Call ahead to 454-5555 to order takeout pizza or a bowl of chili for your office luncheon or group gathering. Pizza and chili are available for pick up on Wednesdays from 11 a.m. to 1:30 p.m. No delivery available. For better service, you may call on any day and preorder. Chili is \$3.95 and pizzas are available in 12 or 16 inch and range in price starting from \$7. House favorites include the Falcon (cheese), Eagle (pepperoni and cheese), Stratofortress (pepperoni and bacon

Stromboli with mozzarella and ricotta), Mustang (ham, bacon, pineapple and cheese), Spirit (veggie – mushrooms, green pepper, onion, tomato, black olives, basil, olive oil and feta cheese) and Galaxy (pepperoni, sausage, ham, green pepper, onion, mushrooms, black olives, bacon and extra cheese). Gourmet specialties include the Warthog (ground beef, cheddar, red onion, tomato, spinach and sesame seeds), Phantom (spinach, basil, sun-dried tomatoes, garlic, olive oil, pesto, mozzarella and parmesan), Blackbird (chicken, spinach, jack cheese, alfredo sauce, parmesan, gouda and mozzarella) and Raptor (pepperoni, ham, sausage, bacon, ground beef, olive oil and cheese). Fly solo and build your own (\$1 for individual toppings). The pizza menu is also available for dinner on Thursday, Friday and Saturday from 5-9 p.m.

Movie nights are every Thursday at 6:30 p.m. with dinner available from the Express or Pizza menus from 5-9 p.m. The schedule for January is: Jan. 14 – "Zombieland," rated R starring Woody Harrelson and Jesse Eisenberg. A new horror comedy focusing on two men who have found a way to survive a world overrun by zombies. Jan. 21 – "Where the Wild Things Are," rated PG starring Max Records and Pepita Emmerichs. Max, a disobedient little boy, is sent to bed without his supper and creates his own world – a forest inhabited by ferocious wild creatures that crown Max their ruler. Jan. 28 – "Whiteout," rated R starring Kate Beckinsale and Gabriel Macht. U.S. Marshal Carrie Stetko tracks a killer in Antarctica as the sun is about to set for six months.

Friday night dining room specials available from 5-9 p.m. **Jan. 8:** Pork roast with sauerkraut and kielbasa served with mashed potatoes, black-eyed peas or applesauce, \$8.95 for members, \$10.95 for non members. First Friday Jam begins at 6 p.m. **Jan. 15:** Mongolian barbecue, \$9.95 for members, \$11.95 for nonmembers. **Jan. 22:** Prime rib for two, \$33 for members, \$35 for nonmembers. **Jan. 29:** Grilled salmon kyoto served with rice, chef's veggie and salad bar, \$10.95 members, \$12.95 nonmembers. Please call for reservations to ensure special is available. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

Saturday availability and specials: **Jan. 9:** Basil Parmesan shrimp served with two sides and salad bar, \$10.95 for members, \$12.95 for nonmembers. **Jan. 16:** Drunken shrimp served with rice, chef's veggie and salad bar, \$10.95

members, \$12.95 non members. **Jan. 23:** Sesame seared tuna served with two sides and salad bar, \$10.95 members, \$12.95 non members. **Jan. 30:** Closed for special event; Pizza and Express menus to go only. The dining room is open on Saturdays from 5-9 p.m. unless otherwise advertised. Please call for reservations to ensure these specials are available. All specials and times are subject to change without notice. Please call ahead to ensure availability and openings.

The ALC is available for lunch special functions. Call 454-3350, for details or to book a function.

Family Member/Youth Programs (FamY) 454-3277

Youth Movie Night returns Jan. 15 from 6-9 p.m. Ages 9 and up are invited to the Open Rec. Center to watch a movie. There will be free popcorn and pizza by the slice for \$1. Juice and water will also be provided free of charge.

Teen Dance scheduled for Jan. 23. Ages 13-18 are invited to a black and white dance. Come dressed in only those colors. Food and snacks will also be black and white such as Oreos and zebra cakes. There will be lots of music for a night full of fun dances. Things get underway at 9 p.m. and end at midnight. Cost is \$15 and deadline to sign up is Jan. 13 (late/cancellation fee \$5). There must be a minimum of 25 to hold the event. Maximum participation allowed is 45 so sign up soon.

4-H Project Groups set to meet 5-6 p.m. Jan. 28. Join the Dog Group and learn how to care and groom your favorite companion. Join the Line and Design Group and learn about different life skills. Become part of the Photography Group and learn how to become a great photographer.

"UGT" – You Got Talent contest is coming March 20 to be held at Arnold Lakeside Center. Start getting your acts together for this family-oriented event. Contestants can enter one of the following: children (6-8 years), preteen (9-12 years), teen (13-18) or group. A performer meeting will be held at the Youth Programs building (3055) at 4:30 p.m. on March 16.

Preschool Playgroup meets every Thursday from 9 -11 a.m. in the Youth Programs area (back portion of building 3055, previously known as Community Activities Center; enter through back doors). Parents and children up to age 5 engage in arts and crafts, story time and games. Call 454-3277 with any questions. Sign up is not required, just show up and have a good time.

704th Services Division hours of operation:

Arnold Lakeside Center – Special function luncheons available. Call 454-3350 for arrangements. Catering/Management offices Tuesday-Friday 10 a.m.-3 p.m.; Dinner Arnold Express Menu or Hap's Pizza only Thursday 5-9 p.m., dinner or Arnold Express Menus and Hap's Pizza Friday and Saturday 5-9 p.m.; Main Bar Thursday 4:30-8:30 p.m., Friday and Saturday 4:30-9 p.m.; Social Hour Friday 4-6 p.m.

Family Member/Youth Programs – Youth Open Rec Tuesday and Thursday 4-7 p.m., Wednesday 1-6 p.m., Friday 4-9 p.m., Saturday 12-5 p.m.; Mommy and Me Playgroup Thursday 9-11 a.m.

Outdoor Rec / Arts & Crafts – Main Office, Check In, Marina and Auto Shop Tuesday through Sunday 8 a.m. – 6 p.m.; FamCamp Store Tuesday through Friday 3-5 p.m., Saturday and Sunday 8-11 a.m., 2-5 p.m.

Fitness Center – Monday-Friday 5 a.m.-9 p.m.; Saturday 8 a.m.-4 p.m.; Sunday 12-5 p.m.

Arnold Golf Course – Pro Shop and Driving Range daily 8 a.m.-5 p.m.. Mulligan's Grill: daily 7 a.m. – 2 p.m.

Recycling – Monday through Friday 7 a.m. – 4 p.m.

Wingo Inn – Monday through Friday 7 a.m. – 6 p.m., Saturday and Sunday 8 a.m. – 4 p.m.

Barber Shop: by appointment – Monday, Wednesday & Friday 8 a.m.-2 p.m.; Thursday 8 a.m.-noon

Fitness Center 454-6440

Random Fitness Initiative continues. Twice a month the Fitness Center staff will roam the base during lunch and award people for showing self initiative for working out on base at a location other than the Fitness Center. Those selected will receive a prize.

Intramural basketball will begin Jan. 12. Games are played on Tuesdays and Thursdays beginning at 5:30 p.m. Open to ages sixteen and up. Call to sign up as individuals or teams.

Karate class is held 3-5 p.m. Tuesdays and Thursdays on the main gym floor.

This class is taught by volunteer Don Gardner of ATA. For more information on these classes contact Don at 454-3497.

Outdoor Rec (ODR) 454-6084

Paintball set for Jan. 9. Ages 10 and older are invited to play. Meet at Outdoor Rec. at 9:30 a.m. Cost is \$20 and includes lunch. Remember to wear long sleeved shirts and long pants.

Corn Hole is now available for rent for office functions and private events. Four sets are available to accommodate larger groups. Cost is \$10 per day or \$15 for two days. Rental reservations may be made through Outdoor Recreation (building

3055, previously known as Community Activities Center) or by calling 454-6084.

Reservation Policy: FamCamp and Crockett Cove reservations may be made 45 days in advance for active duty military and reserve components and 30 days in advance for all other eligible patrons. Marina reservations may be made 15 days in advance for active duty and reserve components and 10 days for all other eligible patrons. Reservations are made through Outdoor Rec., 454-6084.

Planning a trip to the Tennessee Aquarium? Pick up a 10 percent discount coupon from the Outdoor Rec counter for all Tennessee Aquarium venues.

The Airman and Family Readiness Center is hosting a day-long scrapbooking event at the GLC Jan. 23 from 9 a.m.- 9 p.m. Cost is \$25, which includes lunch, dinner and a bag full of scrapbook goodies. Register by Jan. 15.