

U.S. Air Force F-16 Fighting Falcon fighter aircraft, assigned to the 36th Fighter Squadron, participate in an elephant walk during Exercise VIGILANT ACE 18 at Osan Air Base, Dec. 3, 2017. The exercise gives aircrews and air support operations personnel from various airframes, military services and

**Exercise Vigilant Ace Concludes** 

our Republic of Korea partners an opportunity to integrate and practice combat operations against realistic air and ground threats. (U.S. Air Force

#### **Pacific Air Forces Public Affairs**

**OSAN AIR BASE** -- The annual VIGILANT ACE 18, a regularly scheduled flying exercise, was held on the Korean Peninsula Dec. 4-8, and 12,000 U.S. personnel participated along with Airmen from the Republic of Korea Air Force. All F-22s and F-35s returned to their home bases at the end of the exercise. This realistic air combat exercise is designed to

photo by Staff Sgt. Franklin R. Ramos/Released)

enhance interoperability between U.S. and Republic of Korea forces and increase the combat effectiveness of both nations.

U.S. Air Force, Marine Corps, and Navy personnel trained with air assets from the Republic of Korea, flying 230 aircraft at eight U.S. and ROK military installations. VIGILANT ACE is part of a continuous exercise program designed to enhance readiness and operational capability of U.S.

#### and ROK forces.

Previously known as Beverly Bulldog, this exercise is regularly scheduled training, held annually, and VIGILANT ACE 18 highlights the longstanding military partnership, commitment and enduring friendship between two nations. It is designed to ensure peace and security on the Korean Peninsula, and reaffirms the U.S. commitment to stability in the Northeast Asia region.









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# Could flying faster save the Air Force fuel?

NEWS



Two F-22 Raptors prepare to take off during an Air Force Operational Energy mission at Joint Base Elmendorf-Richardson in Anchorage, Alaska, Aug. 13, 2017. The aircraft were part of a demonstration to assess if flying at an increased speed consumes less fuel while saving precious flight hours. (U.S. Air Force photo by Corrie Poland)

#### By Corrie Poland, Air Force Operational Energy

JOINT BASE ELMENDORF-RICHARDSON, Alaska (AFNS) --On a Sunday morning just outside of Anchorage, Alaska, a group of Hawaii Air National Guard fighter pilots gathered around a desk at Joint Base Elmendorf-Richardson to hear the day's operational briefing after three weeks of training at Red Flag Alaska.

As they sipped coffee and listened to the delivery control officer, they learned the mission was not difficult, but it was certainly unique. In support of the Air Force Operational Energy Program, six F-22 Raptors flew from Alaska to JB Pearl Harbor-Hickam, Hawaii, accompanied by two aerial refueling KC-10 Extenders on Aug. 13, 2017, to determine if flying at an increased speed could optimize operational energy consumption.

"It's important to preserve our resources," says Capt. Dan Thompson, F-22 pilot and the flight lead.

"Good training is an absolute necessity for our combat capability, so preserving resources and hours on the airplane gives us the ability to invest those [hours] in training opportunities and time back home," Thompson said.

The concept of increased speed, although seemingly counterintuitive, was first explored by the 618th Air Operations Center in 2014. They discovered that flying at a higher speed could save total fuel consumption and flight hours, but it still needed to be proven in action.

To demonstrate the concept, one cell of F-22s and an accompanying tanker for refueling, flew at a higher velocity, while the other cell flew the standard profile and acted as a control group. Throughout the five hour flight, researchers collected multiple data points in order to compare results from both cells. The faster cell was able to cut about ten percent off the total flight time and six percent of the fuel required for this type of aircraft redeployment.

"Last year about 1250 Air Force fighter aircraft were deployed/ redeployed in this manner," said Roberto Guerrero, Air Force deputy assistant secretary for operational energy. "Smart execution like this not only saves us operational costs, but more importantly, preserves time on the aircraft for higher value sorties like combat and training".

As the largest consumer of fuel across the U.S. federal government, spending nearly \$5 billion annually, the Air Force aims to increase operational energy efficiency while continuing to ensure mission success. The next step is to apply this method across other fighter platforms.

"When it comes to operational energy, it's important to be as efficient as possible, allowing us to maximize the number of fighters we move and saving both the government and the taxpayer money while doing it," said Lt. Col. Russell Johnson, delivery control officer from the Air Operation Squadron at Air Combat Command Headquarters.

The mission of Air Force Operational Energy is to break barriers by connecting Airmen with technology, data, and innovative thinking to develop and champion energy-informed solutions across the Air Force. For more information and news visit: www.safie.hq.af. mil/OpEnergy/ and www.Facebook. com/AirForceEnergy.

NEWS

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## U.S., ROK Air Forces conclude bilateral exercise



#### By Staff Sgt. Alex Fox Echols III 51st Fighter Wing Public Affairs

**OSAN AIR BASE** -- Osan is one of eight military stations across the Korean Peninsula concluded exercise Vigilant Ace 18, an annual exercise geared toward enhancing interoperability between U.S. and ROK forces and ensuring local peace and security, Dec. 4-8.

During the week-long exercise, the U.S. and ROK are combining their forces with a total of 230 aircraft, training on mutual support procedures and further improving understanding and trust between the two nations.

"In the event we need to help defend our 51 million Korean allies, I need to be sure the 51st Fighter Wing is synchronized with the Combined-Joint force," said Col. William D. Betts, 51st FW commander. "Vigilant Ace is an opportunity for us to do just that; focus on getting smarter, faster and more capable than we were yesterday while we generate combat airpower and strengthen the alliance."

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### • BULLETIN •

**CHRISTMAS DAY: 2**5 Dec 2017, Monday, is a legal holiday for both Korean National (KN) and U.S. civilian employees. Those KN and U.S. civilian employees scheduled to work on 25 Dec 2017, Monday, will be paid holiday premium pay. All others will be released from duty without charge to leave or loss of pay. For KN civilian employees, if a holiday falls on their non-work day, no substitute observance day will be granted.

**NEW YEAR'S DAY:** 1 Jan 2018, Monday, is a legal holiday for U.S. civilian employees; 1 and 2 Jan 2018, Monday and Tuesday, are official holidays for KN employees. Both U.S. and KN civilian employees who are regularly scheduled to work on their observed holiday will be paid holiday premium pay. All others will be released from duty without charge to leave or loss of pay. If a holiday falls on KN employee's non-work day, no substitute day will be granted.

Any questions should be directed to Ms. Kim, Min Kyo of the Civilian Personnel Office at 784-4434/8177. (51 FSS/FSCA)



## Vipers, Lightning fly Korean Peninsula together for first time

#### By Tech. Sgt. Joshua Rosales 8th Fighter Wing Public Affairs

KUNSAN AIR BASE -- Exercise VIGILANT ACE 18 concluded across the Korean Peninsula and the Wolf Pack's F-16 Fighting Falcons, better known as Vipers, played host to the fifth-generation Joint Strike Fighter, the F-35A Lightning II, at the historic 8th Fighter Wing, Kunsan Air Base, Republic of Korea.

The Vipers and Lightings began training sideby-side last week in preparation for the F-35's first integration into the week-long, annual flying exercise, and launched their first flights for VIGILANT ACE on Dec. 4, 2017.

Currently forward deployed to Kadena AB, Japan from Hill Air Force Base, Utah, U.S. Air Force Airmen and F-35s from the 34th and 466th Fighter Squadrons employ the newest and most advanced fighter aircraft in air battle scenarios with a variety of airframes from equally diverse points in modern aviation history.

"This is a great opportunity for some of our younger pilots to fly with our more experienced guys, as well as join in with the Wolf Pack and the rest of the air assets out here participating in VIGILANT ACE," said Lt Col Dave DeAngelis, 466th FS commander. "Having the F-35 here on peninsula during this exercise, which is intended to test the combined air picture, validates our ability to jump into the fight



A U.S. Air Force Airman signals an F-16 Fighting Falcon pilot participating in an elephant walk to test the 8th Fighter Wing's ability to generate combat ready aircraft during exercise VIGILANT ACE 18 on Dec. 3, 2017, at Kunsan Air Base. Airmen at Kunsan supported the regularly scheduled week-long exercise, which featured 12,000 U.S. personnel working alongside members of the Republic of Korea Air Force at eight U.S. and ROK military installations. (U.S. Air Force photo by Senior Airman Colby Hardin)

#### December 08, 2017

at a moment's notice and support forces in the region."

A U.S. Air Force Airman signals an F-16 Fighting Falcon pilot participating in an elephant walk to test the 8th Fighter Wing's ability to generate combat ready aircraft during exercise VIGILANT ACE 18 on Dec. 3, 2017, at Kunsan Air Base, Republic of Korea. Airmen at Kunsan supported the regularly scheduled week-long exercise, which featured 12,000 U.S. personnel working alongside members of the Republic of Korea Air Force at eight U.S. and ROK military installations. (U.S. Air Force photo by Senior Airman Colby Hardin)

A U.S. Air Force Airman signals an F-16 Fighting Falcon pilot participating in an elephant walk to test the 8th Fighter Wing's ability to generate combat ready aircraft during exercise VIGILANT ACE 18 on Dec. 3, 2017, at Kunsan Air Base, Republic of Korea. Airmen at Kunsan supported the regularly scheduled week-long exercise, which featured 12,000 U.S. personnel working alongside members of the Republic of Korea Air Force at eight U.S. and ROK military installations. (U.S. Air Force photo by Senior Airman Colby Hardin)

The regularly scheduled flying exercise features more than 230 aircraft with U.S. and Republic of Korea Air Force personnel working alongside each other, comparable to participation from previous years' iterations. In terms of geographic scope, U.S. units from Japan, Guam, and Alaska are participating in the realistic air combat exercise with ROKAF units at eight U.S. and Korean military installations across the southern portion of the peninsula – enhancing the combat effectiveness of all involved in the air battle.

"Every day at the Wolf Pack we're able to project power across the peninsula with one of the world's most versatile and capable aircraft," said Col. David Shoemaker, 8th Fighter Wing commander. "The Viper is a workhorse, not only for us, but also for many other nations, to include the ROKAF. Our ability to train and fight as a cohesive force is as important as it ever has been in the past six decades." Through various simulated scenarios developed by exercise planners, the 2,700 Airmen stationed at Kunsan verify their ability to support U.S. Forces Korea contingency operations by launching combat jets to take the fight north, defend the base from potential hostile forces and accept follow-on forces from U.S. bases around the region.

"During my three tours here at Kunsan, we've had a similar approach to our readiness in terms of how we exercise," said Shoemaker. "It's natural for us to develop and evolve as a force, and that's what we're doing now by bringing fifth-generation assets into the fold. We're simply adding a new dynamic to the air component and how we maintain peace on the peninsula."

In addition to the six U.S. Air Force F-35As supplementing the contingent of F-16s here and other U.S. and ROK forces already on the peninsula, 12 U.S. Marine Corps F-35Bs, six U.S. Air Force F-22s, U.S. Navy aircraft

and other aircraft in the region are also participating in VIGILANT ACE. The overall scale of forces helps contribute to a realistic site picture for those participating, especially with regard to air assets integrating in a wartime scenario with their support personnel and equipment.

"Our combined operations and maintenance team has been doing phenomenal out here and we appreciate all the support of the 8th FW," said DeAngelis.

He further went on to state that because of the support, they "were able to quickly generate training sorties after [their] arrival from Japan," ensuring a rapid employment of fifth-generation assets on the peninsula.

Previously known as Beverly Bulldog, VIGILANT ACE enables both nations' training programs and fulfills obligations to the Mutual Defense Treaty, furthering the longstanding military partnership, commitment and enduring friendship between the two.



U.S. Air Force F-16 Fighting Falcons assigned to the 8th Fighter Wing taxi in front of an F-35A Lightning II assigned to Hill Air Force Base, Utah at Kunsan Air Base, Dec. 3, 2017. The 8th Fighter Wing hosted the fifth-generation strike fighters to train side-by-side during the week-long, bi-annual exercise VIGILANT ACE 18. (U.S. Air Force photo by Master Sgt. Frank W. Miller III)

### Andersen AFB to host 66th Annual Operation Christmas Drop

#### By 36th Wing Public Affairs

**ANDERSEN AIR FORCE BASE, Guam** -- The 66th iteration of Operation Christmas Drop is set to take to the Pacific skies here Dec. 11.

The Department of Defense's longest recurring humanitarian mission is a long-standing annual tradition of packaging and delivering food, tools and toys to more than 50 remote islands in the South-Eastern Pacific, including the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, and the Republic of Palau.

During the weeklong international charity effort, Pacific Air Forces airpower ambassadors from Andersen AFB, Guam, Joint Base Pearl Harbor-Hickam, Hawaii and Yokota Air Base, Japan, will work with their partners of the Japan Air Self-Defense Force and the Royal Australian Air Force to execute low-cost, lowaltitude training air drops. The aerial delivery will serve as valuable interoperability training for the partner nations while delivering various donations provided by private donors, charitable organizations and the University of Guam.

This year's event will mark the first time the C-130J Super Hercules will be flown during the operation. The new aircraft model, which is to supplant the C-130H Hercules, will allow aircrews to expedite cargo across an area covering more than 1.8 million square miles.

The rich history of Operation Christmas Drop started in 1952 when locals on the island of Kapingamarangi waved at the aircrew of a passing WB-50 Superfortress, prompting the crew to gather, pack and parachute goods to the islanders.

Nearly seven decades and more than 1 million

pounds of charitable goods later, the 2017 missions are set to carry on this tradition of international goodwill.



(U.S. Air Force photo by Airman 1st Class DELANO SCOTT, 374th Airlift Wing/Public Affairs)



A U.S. Air Force A-10 Thunderbolt II fighter aircraft, assigned to the 25th Fighter Squadron, taxis down a runway during Exercise VIGILANT ACE 18 at Osan Air Base, Dec. 3, 2017. The exercise gives aircrews and air support operations personnel from various airframes, military services and our Republic of Korea partners an opportunity to integrate and practice combat operations against realistic air and ground threats. (U.S. Air Force photo by Staff Sgt. Franklin R. Ramos/Released)

#### - Continues from page 4 -

U.S. Air Force, Marine Corps, and Navy and ROK Air Force personnel at Kunsan, Osan, Jungwon, Gwangju, Wonju, Daegu, Seosan and Cheongju are testing their warfighter procedures, focusing on full-spectrum operations to deter, and if necessary defeat, a rapidly evolving threat.

As they would during a real world event, several units from across U.S. Pacific Command are bedding down at the participating bases to augment their current forces, ensuring training scenarios during VA18 are as true to life as possible.

"The threat here on the peninsula is very real, and countering that threat needs to be in the forefront of our minds," said Betts. "My biggest expectation for the Wing is to remove any 'exercise' mindset from the equation and maximize the realism of every response. We will ensure we have no regrets if we find ourselves executing contingency operations."

In the air, U.S. F-22 Raptors, F-35 Lightning IIs, F-16 Fighting Falcons, F-15 Eagles, F-18 Hornets and EA-18G Growlers are flying alongside ROK F-15K Slam Eagles and F-4 Phantom IIs, providing realistic air combat training and enhancing operational and tactical-



Maintainers from the 25th Fighter Squadron prepare an A-10 Thunderbolt II aircraft for live weapons loading during exercise Vigilant Ace 18 at Osan Air Base, Republic of Korea, Dec. 2, 2017. The exercise gives aircrews and air support operations personnel from various airframes, military services and our Republic of Korea partners an opportunity to integrate and practice combat operations against realistic air and ground threats. (U.S. Air Force photo by Staff Sgt. Franklin R. Ramos/Released)

level coordination through combined and joint combat training.

Though the name has changed, U.S. and ROK forces have been working together in this annual exercise for the last nine years, now as Vigilant Ace and before as Beverly Bulldog. It serves as one way the U.S. can reaffirm its commitment to stability in the Northeast Asia region and highlight its longstanding military partnership and enduring friendship with the ROK.

- More photos on page 11 -

U.S. Air Force Airman 1st Class James Egan, 51st Logistics Readiness Squadron fuels distribution operator, fuels an F-16 Fighting Falcon aircraft during exercise Vigilant Ace 18 at Osan Air Base, Dec. 2, 2017. The exercise provides realistic air combat training for the United States and Republic of Korea, testing and refining the readiness and interoperability of US-ROK forces to deter aggression and provide a rapid response to attack. (U.S. Air Force photo by Staff Sgt. Alex Fox Echols III)

## NEWS





U.S. Air Force Senior Airmen Hamlin Burch and Jacob Wiemers, 25th Fighter Squadron weapons load crew members, remove a weapon system from an A-10 Thunderbolt II aircraft during exercise Vigilant Ace 18 at Osan Air Base, Dec. 2, 2017. The exercise provides realistic air combat training for the United States and Republic of Korea, testing and refining the readiness and interoperability of US-ROK forces to deter aggression and provide a rapid response to attack. (U.S. Air Force photo by Staff Sgt. Franklin R. Ramos/Released)

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## New Combat Arms bat Arms Facility is Open for Business



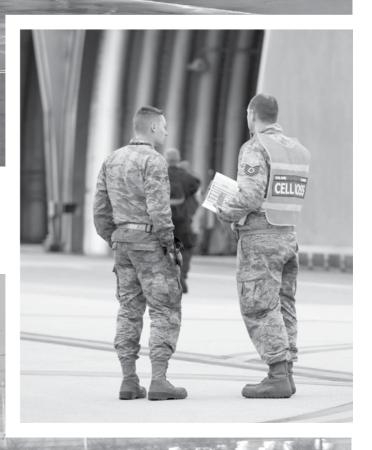


<above> U.S Air Force Tech. Sgt. Jeremy Rhodes, 51st Security Forces Squadron combat arms NCOIC, watches the first shots being taken during the grand opening of the new combat arms facility at Osan Air Base, Nov. 28, 2017. This new facility will allow for double the amount of people to be trained at once. (U.S. Air Force photo by Staff Sgt. Tinese Jackson)

<left> Leadership from the 51st Fighter Wing and 51st Security Forces Squadron prepare to take the first shots during the grand opening of the new combat arms facility at Osan Air Base, Nov. 28, 2017. This new facility will allow for double the amount of people to be trained at once. (U.S. Air Force photo by Staff Sgt. Tinese Jackson)

#### - More photos from page 9 -

A U.S. Air Force F-16 Fighting Falcon, assigned to the 36th Fighter Squadron, taxis down a runway during Exercise VIGILANT ACE 18 at Osan Air Base, Dec. 3, 2017. The exercise provides U.S. and RoK forces training to employ Airpower to deter aggression, preserve the armistice, defend the RoK and defeat any attack against the alliance. (U.S. Air Force photo by Staff Sgt. Franklin R. Ramos/Released)



U.S. Air Force Airmen confer on the flightline during exercise Vigilant Ace 18 at Osan Air Base, Dec. 2, 2017. The exercise provides realistic air combat training for the United States and Republic of Korea, testing and refining the readiness and interoperability of US-ROK forces to deter aggression and provide a rapid response to attack. (U.S. Air Force photo by Staff Sgt. Alex Fox Echols III)

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U.S. AIR FORCE

A U.S. Air Force C-17 Globemaster III cargo aircraft, assigned to Joint Base McGuire-Dix-Lakehurst, N.J., begins take-off during Exercise VIGILANT ACE 18 at Osan Air Base, Dec. 3, 2017. The exercise allows U.S. and RoK forces to train together to deter aggression, preserve the armistice, and defeat any attack against the alliance. (U.S. Air Force photo by Staff Sgt. Franklin R. Ramos/Released)

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## We Go Together: USAF, ROKAF strengthen relationship with Buddy Wing

#### **By Senior Airman Colby L. Hardin** 8th Fighter Wing Public Affairs

**KUNSAN AIR BASE** -- If called upon to take the fight north, the Wolf Pack would not go it alone.

As a part of a combined force, the U.S. and Republic of Korea air forces on the peninsula would need to execute combat operations as a singular and fluid force. Because of this, they practice together to remain proficient in their deadly mission, should they ever be called to conduct it.

Since 2013, both nations have worked to enhance their focus through the 7th Air Force initiated program dubbed Buddy Wing, in which U.S. Air Force and ROKAF Airmen flight-plan and fly together to achieve shared proficiency in the skies above Korea.

#### **Red Flag Origins**

A Republic of Korea Air Force F-15 Egle maneuvers toward a 909th Air Refueling Squadron KC-135 Stratotanker during a refueling exercise Sept. 12, 2016, over the Pacific Ocean. The 909th and ROKAF trained together to enhance nighttime, long-distance flying capability. (U.S. Air Force photo by Senior Airman Peter Reft) Buddy Wings are week-long training exercises in which U.S. Air Force and ROKAF units integrate to perform a variety of tactical flying missions in support of larger combat operations. The program began four years ago when the U.S. helped prepare the ROKAF for their inaugural participation in RED FLAG - Alaska.

Since its inception, the program has continued to evolve, encompassing the full spectrum of combat training and operations while rotating locations between different U.S. and ROK bases across the peninsula.

"In 2013, we created the building blocks or basic structure for the program" said Col. Steven Tittel, 8th Fighter Wing vice commander. "Now that we have moved past the program's initial vision, we are able to seamlessly integrate increasing levels of complexity in our combined training."



A Republic of Korea Air Force F-15 Eagle maneuvers toward a 909th Air Refueling Squadron KC-135 Stratotanker during a refueling exercise Sept. 12, 2016, over the Pacific Ocean. The 909th and ROKAF trained together to enhance nighttime, long-distance flying capability. (U.S. Air Force photo by Senior Airman Peter Reft)

#### **Building Muscle Memory**

Due to continued training repetition, each iteration of the Buddy Wing exercise provides pilots and mission planners greater potential for interaction between aircrew and aircraft capabilities.

The Wisconsin Air National Guard's 115th Fighter Wing, U.S. Air Force's 8th FW and Republic of Korea Air Force's 38th Fighter Group took to the skies together Oct. 30, 2017 to demonstrate their ability to Fight Tonight in the skies above the Korean Peninsula. "During my first tour here as a

Lieutenant with the Pantons, almost twenty years ago, we didn't have this type of integration," said Tittel. "We generally flew in our assigned airspace, and the ROKAF flew in theirs, unless there was a peninsulawide exercise. Now we are putting jets in the same piece of sky to integrate our capabilities, in order achieve tactical objectives that will support performing our wartime tasks. We've come a long way in terms of our pilots working together."

Since one of the key objectives to the Buddy Wing program is pilot integration during combat, it's important that members at the tactical level experience the benefits as well.

"We are bridging the language and culture gaps more and more each year," said Capt. Ryan Clisset, 35th FW instructor pilot. "We learn and grow together. Eventually we can get to a point where we can speak the same language and know each other's tactics."

#### **Expanding the Sight Picture**

Coming together to train between the US and ROK Air Forces isn't the only way the Buddy Wing Program evolved on the Korean Peninsula. In addition to the primary host residing with Osan Air Base, ROK in the beginning and now rotating between various U.S. and ROK air bases, the program also tests out each units' abilities to logistically support Buddy Wings.

"This constant rotation helps us to overcome the logistic challenges involved with supporting an exercise," Tittel added. "Constantly adding new units to the picture also helps us propagate tactical expertise across the entire combined force"

And, with ever evolving adjustments and improvements based on the results of the previous exercise, more and more units may soon participate in the training.

U.S. Air Force pilots assigned to the 8th Fighter Wing and Republic of Korea Air Force pilots assigned to the 38th Fighter Group in a formation during a "Friendship Flight" mission in the airspace around Kunsan Air Base, Republic of Korea, Oct. 30, 2017. This type of mission, among other training sorties, allows pilots to communicate and hone skills necessary to carry out combined missions as a cohesive component. (U.S. Air Force

photo by Senior Airman Colby L. Hardin)

The experience gained from training with ROKAF during the Buddy Wing exercises comes at a very low relative cost. The program is easily planned, doesn't require excessive amounts of manpower from the parties involved and helps amplify regularly scheduled training for the Wolf Pack and other units.

"We're in sustainability mode right now," said Tittel. "The program is very flexible and the payoff-to-effort ratio for everyone involved is as high as any other exercise on the Peninsula."



U.S. Air Force pilots assigned to the 8th Fighter Wing and Republic of Korea Air Force pilots assigned to the 38th Fighter Group in a formation during a "Friendship Flight" mission in the airspace around Kunsan Air Base, Oct. 30, 2017. This type of mission, among other training sorties, allows pilots to communicate and hone skills necessary to carry out combined missions as a cohesive component. (U.S. Air Force photo by Senior Airman Colby L. Hardin)

## AF Installation Cyberattack Plans tested during national grid exercise

#### By Mr. Douglas Tucker, Office of the Deputy Assistant Secretary (Environment, Safety and Infrastructure)

**WASHINGTON (AFNS)** -- Recently, 32 Air Force installations and representatives from Headquarters Air Force took part in the two-day national Grid Security Exercise IV, or GridEx IV, to simulate a coordinated response to cyber and physical security threats to North America's electricity grid and other critical infrastructure.

GridEx IV, the largest exercise of its kind, brought together more than 6,500 participants from 450 government agencies and private industry from the U.S., Canada and Mexico. During the exercise, participants from the Department of Defense, civilian federal agencies, state and local entities, banking and telecommunication sectors and utilities simulated how they would respond to, recover from and facilitate the restoration of damaged grid infrastructure.

"The Air Force recognizes the resiliency of the energy grid, but also understands both nature and adversaries could separate our missions from the electrons they need," said Mark Correll, deputy assistant secretary of the Air Force for Environment, Safety and Infrastructure. "Participating in exercises like GridEx IV, allows us to test our preparedness plans and ensure the Air Force has resilient energy capabilities to assure our critical defense missions continue during a reallife crisis."

One of the main objectives of the exercise was to identify communication friction points and look for possible solutions.

Staff from Joint Base Langley-Eustis, Virginia, were among the Air Force participants in the exercise.

"Our participation in GridEx provided a great forum to work with our key mission partners and utility service provider," said Dan Porter, 633rd Civil Engineer Squadron base energy manager. "It helped to improve our lines of communication, increased our collaborative efforts and elevated the importance of JBLE's energy assurance plans."

"We are stronger when we put our capabilities together," added Correll. "Sharing information and coordinating resources among public and private efforts will increase the readiness of our installations now and will improve their resiliency in the future." The North American Electric Reliability Corporation, a not-for-profit international regulatory authority whose mission is to assure the reliability and security of the bulk power system in North America and the sponsoring organization for GridEx IV, is currently working on a public report of recommendations and lessons learned. The report is scheduled for release in early 2018.

For more information on how the Air Force is improving resiliency, visit the Assistant Secretary of the Air Force for Installations, Environment and Energy's website at: http://www.safie.hq.af.mil/Programs/Energy.



Staff Sgt. Manoj Williams, 375th Civil Engineer Squadron electrical systems craftsman, greases framework knife blades and tightens loose conductor connections April 9, 2016, at Scott Air Force Base, III. The base required a scheduled power outage to repair critical high-voltage electrical components. (U.S. Air Force photo by Airman Daniel Garcia)

## CRIMSON SKY

## Chief Wright to Airmen: know your retirement options

#### By Chief Master Sgt. of the Air Force Kaleth O. Wright

**WASHINGTON (AFNS)** -- If I had to pick just one thing I'm most passionate about as the Chief Master Sgt. of the Air Force, without a doubt it would be taking care of our Airmen and their families professionally, physically, spiritually and financially. I'm a firm believer that these four things go hand in hand. In order to be the best, most resilient Airman possible, you have to balance your professional, physical, spiritual and financial wellness. This is why I'm always looking to arm our Airmen with knowledge to help them grow and make the best decisions possible in their lives.

Part of arming our Airmen with knowledge means providing them the tools necessary to understand and smartly plan their long-range financial goals. But this planning isn't just for Airmen with families; it's vital for all Airmen.

Beginning Jan. 1, 2018, the Department of Defense will transition to the Blended Retirement System. If you haven't heard about BRS, you need to get up to speed now and learn all you can. I need each of you to take an active interest in your financial planning by using every resource we've made available to learn about the BRS.

The BRS gives Airmen an opportunity to save their money in a portable Thrift Savings Plan while receiving matching government funds at the same time. This is the most basic layman's description of the program, which is why I need you to arm yourselves with all of the research and information available. To help you, our Air Force leaders have put together a team of experts ready to provide extensive training. Certified personal financial counselors are available at your Airman and Family Readiness Center. These experts cannot decide for you, but they can help you evaluate which retirement plan is best for you. Every Airman's situation is different, financial goals are unique to each Airman and there is no "one size fits all" decision.

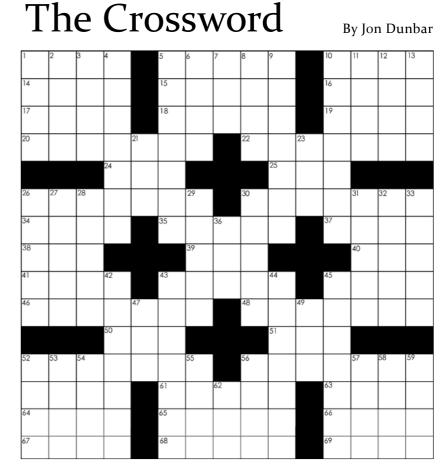
Airmen who enter the Air Force on or after Jan. 1, 2018, are automatically covered by the BRS. Active component Airmen serving now and those who enter the Air Force on or before Dec. 31, 2017, will be grandfathered under the current retirement system. Airmen with fewer than 12 years of active service on Dec. 31, 2017, or Reserve Component Airmen with fewer than 4,320 retirement points as of Dec. 31, 2017, have the choice to opt into the BRS. Reserve Component members' "retirement points" and retirement eligibility for the defined benefit are the same under the BRS as under the current retirement systems. The opt-in window for BRS will run from January 1, 2018 through December 31, 2018.

Make your decision knowing only you can determine which system is best for you, and understand that if you opt into BRS, it is irrevocable. You only have one chance to make this choice, so it's imperative you and those involved in making financial decisions for your family fully understand the pros and cons of both retirement systems.

I encourage each of you to take all of the training available on ADLS and utilize the BRS comparison calculator on the Military Compensation website (http://militarypay.defense.gov/Calculators/) before making an appointment with your base financial counselor. The calculator provides a comparison between the current retirement system and the BRS. Doing your homework and preparing your questions ahead of time will help you get the most from your financial counseling appointment. I would like to see all eligible Airmen trained as soon as possible to give everyone time to really think about their options and be fully prepared before making this life-impacting decision.

There are pros and cons to every major decision we make, and this holds true for both retirement plans. I can't tell you what to do. I can't tell you what's best for your family. All I can tell you is that you need to arm yourself with knowledge. Check out the training, talk to people who can provide you with objective advice, talk to those who will be most impacted by your decision and execute your plan knowing you made the best decision for you and your family.

For more information about the BRS, visit the BRS website at http://militarypay.defense.gov/BlendedRetirement/.



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## Around the Pen

Gwangju **Mayor visits U.S.** members at Gwangju **Air Base** 



<above> From left to right, U.S. Air Force Brig. Gen. Case A. Cunningham, Lt. Col. David M. Skalicky, Mayor of Gwangju, Jang Hyun Yoon and Republic of Korea AF Brig. Gen. Gyu Shik Kang, pose for a group photo in front of the F-22 Raptor, Dec. 07, 2017, at Gwanju Air Base, ROK. The Mayor was able to talk to key leaders of the Vigilant Ace exercise at Gwangju AB. (U.S. Air Force photo by Senior Airman Jessica. H. Smith)

<left> Mayor of Gwangju, Jang Hyun Yoon, U.S. Air Force members and Republic of Korea AF members, discuss the F-22 Raptor, Dec. 07, 2017, at Gwanju Air Base, Republic of Korea. The Mayor was able to talk to key leaders of the Vigilant Ace exercise at Gwangju AB. (U.S. Air Force photo by Senior Airman Jessica. H. Smith)

**Wolf Pack** tests combat capabilities in large force employment drill

A U.S. Air Force F-16 Fighting Falcon with the 35th Fighter Squadron takes off from Kunsan Air Base, Nov. 17, 2017 during a large force employment drill in which the 8th Fighter Wing launched more than 20 aircraft to test its ability to conduct combat operations with large numbers jets in the air. The 8th FW regularly tests its ability to conduct LFEs in exercises and regular training, which gives pilots, maintainers and support personnel the scenarios they need to validate their ability to launch large numbers of aircraft in a short amount of time. (U.S. Air Force by Capt. Chris Mesnard)

### IMUNITY BRIE

#### Kunsan

#### **Kunsan Photo Club**

Interested in sharing your photography experience with others and exploring Korea along the way? Have a camera, but want to learn how to use it more completely? Then join the Kunsan Photo Club as they delve into the finer qualities of photography where the key concept is: "It's not the camera that makes a great photo, but the photographer." If interested in joining, the group can be found on Facebook, just search for "Kunsan Photo Club."

#### Wolf Pack Lodge

#### Lodging Space A Policy Need a break? Got family visiting and no room to house them? You can book lodging rooms on a sp available basis up to 120 days advance for a maximum of 30 d depending on availability. You also book reservations for holiday season (November and cember) up to 30 days in adva

for a maximum of 15 days. pending on availability) Book r for all of those relatives coming for the holiday!

Reservations - Front Desk-DSN 782-1844 or Commercial (82)63-470-1844 FAX: DSN 315-782-0633 Commercial (82)63-470-0633

#### Sunday Sonlight dinner

Every Sunday, volunteers from a specific unit cook dinner for their fellow Wolf Pack members at the Sonlight Inn. The dinner begins at 6 p.m. following grace led by a chaplain. Meals range from "breakfast for dinner" to "Italian cooking" to

"Southern style." For more information or to volunteer, contact the chapel at 782-HOPE.

#### **Sponsor training**

Learn creative ways to assist newcomers reporting to Kunsan AB. Registration required. Class is held at the Airman and Family Readiness Center. Call 782-5644 for more information, dates or to sign up.

#### **ROKAF English Class**

Team 5/6 is looking for volunteers to support the ROKAF English class every Saturday, at the Sonlight Inn. You will be talking to ROKAF Airmen (enlisted) for approximately one hour. This event is open to all

Free to all. Prizes for first and sec-

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ond places. Prizes include Wolf Pack Won. To sign up, dates or for more information, call the CAC at 782-5213 or 4679.

#### Osan

Airman and Family Readiness **Center programs** 

**\*Bundles for Babies -** A workshop for expectant parents who want to learn more about parenting and support programs here at Osan. The class also offers you a finance piece that focuses on budgeting for your new baby from conception to college years and a chance to meet other new parents. Additionally, you'll receive a free "bundle" from the Air Force Aid Society.

**\*Separation & Retirement Benefits -**This is an optional workshop where separating and retiring members can learn about their benefits- includes briefings by MFLC, TMO, CPO, Finance, Tricare and SBP.

\*Spouse Orientation - This is a great opportunity for spouses to learn about the 51st Fighter Wing Mission, Non-combatant Evacuation Operation (NEO) process, and receive a protective (gas) mask demonstration. Spouses will also have an opportunity to meet key base representatives and learn about Korean Culture. As a bonus, a community information fair will end the day.

#### **Anthem Singers**

Sopranos, altos, tenors and bass vocalists are needed to sing the US and ROK National Anthems at various events on base. Practice is held at 5 p.m. every Tuesday at the Chapel Annex. For more information, send an e-mail to: nicholas. smith.21@us.af.mil or ric.rebulanan.1@us.af.mil

\*Volunteers' Training - The goal is to ensure all our volunteers are registered and they receive all tools and information to keep them informed of volunteer opportunities. For more information, call 784-0119.

#### Volunteers for USFK Civilian Employees Appreciation Week

Each year, the USFK Commander takes time to recognize civilian employees for their accomplishments, contributions, and dedication to the USFK mission. This year, General Brooks has designated 11-15 September as USFK Civilian Employees Appreciation Week. We are currently seeking volunteers (US/LN Civilians, Active Duty Military, and Spouses/Family members) to assist in the planning and execution of this wonderful event. If you would like to volunteer to serve as a committee member, please contact Ms. Kim, Min Kyo, min\_kyo.kim.kr@us.af.mil or Ms. Precious Clermont, precious.clermont@us.af.mil at 784-4434/8177.

#### Open Continuous Vacancy Announcement for Pacific West Educational Aide positions

Applicants who previously applied under the Open Continuous Vacancies will need to update their application and required documents under the new announcement numbers if they wish to be considered for the SY 17/18

PLEASE re-iterate to these interested applicants to have a complete resume attached. This includes but not limited to total employment period, i.e., starting and ending dates (month and year) and number of hours per week for each work experience, paid and unpaid. A description of duties and accomplishments for each experience, including volunteer. If a current or former Federal employee, highest Federal civilian grade held, job series, and dates of employment.

Here is the direct link to the 2017 school support positions.

Job Title: Educational Aide (GS-1702-04) Job Announcement Number: 17-042-KO-LG-1981388 https://www.usajobs.gov/GetJob/ ViewDetails/473464800

Kunsan's emergency phone numbers			
Emergency Services	911	Commander's Hotline	782-5224
Off Base/Cell Emergency	063-470- 0911	After-hours medical advice	782-4333
Crime Stop: (to report a crime)	782-5444	IG Complaints FWA Reporting:	782-4850 (duty hours) 782-4942 (anytime)
Base Locator: (after duty hours)	782-4743	Chaplain (After duty hours)	782-6000
Law Enforcement desk	782-4944	Sexual Assault Response Coordinator (SARC)	782-7272
Emergency Leave / Red Cross		782-4601 (on base) 1-800-733-2761 (anytime)	

Osan's emergency phone numbers			
Emergency Services (Fire, Medical, Security Police)	911	Commander's Hotline	784-4811
Off Base/Cell Emergency	031-661- 9111	Crime Stop: (to report a crime)	784-5757
Emergency Room:	784-2500	IG Complaints FWA Reporting:	784-1144
Base Locator: (after duty hours)	784-4597	Emergency Leave	784-7000
Force Protection Information Hotline:	115	Sexual Assault Response Coordinator (SARC)	784-7272
Chaplain (After duty hours)	784-7000	Security Forces Control Center	784-5515

## Crimson Sky

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#### **KUNSAN AIR BASE**

Protestant Services Gospel Service Sunday, 11:30 a.m. Main Chapel, Bldg. 501 Contemporary Service Sunday 5 p.m. Main Chapel, Bldg. 501

Catholic Services Sunday Catholic Mass Sunday, 9:45 a.m. Main Chapel, Bldg. 501 Daily Mass and Reconciliation Please call the Chapel

Other Worship Opportunities LDS Service Sunday, 11:00 a.m. SonLight Inn, Bldg. 510

> Point of Contact: Kunsan Chapel, 782-HOPE

Visit us on SharePoint: https://kunsan.eis.pacaf.af.mil/8FW/HC

### **CHAPEL SCHEDULE**

#### OSAN AIR BASE

Protestant Services Gospel Service Sunday, 12:30 p.m. Chapel Sanctuary Community Service Sunday, 10:30 a.m., Chapel Sanctuary

Protestant Ministries Awana Children's Ministry Wednesday, 5 p.m., Grades 7-12 Wednesday, 6 p.m., Pre-K to 6th Grade Chapel Osan Middle School Men of the Chapel Wednesday, 7 p.m., Chapel Annex Singles & Unaccompanied Thursday, 7 p.m., Mustang Center Friday, 7 p.m., Hospitality House Saturday, 6 p.m., Hospitality House Women of the Chapel Monday, 6:30 p.m./ Tuesday, 9 a.m.

Chapel Annex Youth of the Chapel Monday, 6 p.m., Chapel Annex Catholic Mass Daily Mass Tuesday – Thursday, 11:30 a.m., Chapel Reconciliation Saturday, 4 p.m (or by appointment), Chapel Vigil Mass Saturday, 5 p.m., Chapel Sunday Mass Sunday, 8:30 a.m., Chapel

Catholic Ministries Catholic RE Sunday, 10 a.m., Chapel Annex Korean Prayer Group Tuesday, 9:30 a.m. Blessed Sacrament Bible Study Tuesday, 6 p.m., Chapel Annex Rm 4 Women of the Chapel Meet Monthy, Please call 784-5000

Other Faith Groups Earth-Based (Contact the Chapel) Jewish (Contact the Chapel) Muslim (Contact the Chapel) Buddhist (Contact the Chapel) LDS Sunday, 1 p.m., Contact the Chapel USAG-YONGSAN

**Protestant Services Traditional Service** Sunday, 9:30 a.m. Memorial Chapel, Bldg 1597 Sunday, 9:30 a.m. Brian Allgood Hospital Chapel **Contemporary Service** Sunday, 9 a.m. South Post Chapel, Bldg 3702 Sunday, 10:30 a.m. K-16 Chapel **Nondenominational Service** Sunday, 11 a.m. South Post Chapel, Bldg 3702 Gospel Service Sunday, 1 p.m. South Post Chapel, Bldg 3702 Pentecostal Sunday, 1:30 p.m. Memorial Chapel, Bldg 1597 Latter Day Saints (LDS) Sunday, 4 p.m. South Post Chapel, Bldg 3702 Seventh-Day Adventist Saturday, 9:30 a.m. Brian Allgood Hospital Chapel KATUSA Tuesday, 6:30 p.m. Memorial Chapel, Bldg 1597

#### Catholic Mass Sunday, 8 a.m. Memorial Chapel, Bldg 1597 Sunday, 11:30 a.m. Memorial Chapel, Bldg 1597 Saturday, 5 p.m. Memorial Chapel, Bldg 1597 Ist Saturday, 9 a.m. Memorial Chapel, Bldg 1597 M/W/T/F, 11:45 a.m. Memorial Chapel, Bldg 1597 Tuesday, 11:45 p.m.

Brian Allgood Hospital Chapel

General Service

Episcopal Service Sunday, 11 a.m. Brian Allgood Hospital Chapel

Jewish Friday, 7 p.m. South Post Chapel, Bldg 3702



Point of Contact: USAG Yongsan Religious Support Office, 738-3011 Visit us on SharePoint: http://www.army.mil/yongsan

### SPIRITUAL CHARGE

**Point of Contact:** 

Osan Chapel, 784-5000

Visit us on SharePoint:

https://osan.eim.pacaf.af.mil/51FW/51FW-HC/default.aspx

Visit us on Facebook (OSAN AB CHAPEL)

https://www.facebook.com/OsanABChapel



**Ch, Capt Jennifer Ray** 51st Fighter Wing

hether you think you can, or you think you can't--you're right." A quote by Henry Ford, founder of Ford Motor Company exemplifies the thought behind my interpretation of the Faith Works campaign initiated by United States Air Force Chief of Chaplains, Chaplain, Major General Dondi Costin. The Faith Works initiative takes a look at the correlation between what one believes or chooses not to believe, and the spiritual fitness of that individual. The idea is that wherever one places their focus and energy, will be reflected in one's life. Therefore, if it is a desire to be spiritually fit, we must place our focus on things that are spiritually fulfilling. Doing the opposite, will likely have the adverse effect.

Personally, a large component to my spiritual fitness, is trying new things. I consider myself a somewhat adventurous person, despite my tendency to be a bit clumsy. One day, I decided that I wanted to try something I had never done before... mountain biking! I had a buddy who was very experienced and promised to show me the

## **Faith Works**

ropes. We rented our professional mountain bikes and all the safety equipment that goes along with it. Lord knows, I needed all the safety equipment they had to offer.

We headed out on an 8 mile bike ride through a beautiful wooded trail. I was determined to make this a great experience and to make it through this adventure without any bruises. I was doing well until about 0.3 miles into the ride. My buddy was ahead of me and I trailed. Every few moments he heard the crunches of my bike rolling over some rocks and sticks, the rustling of some bushes, a moderately blared and panicked screech, and me bellowing in a high pitched tone, "I'm Ok!," as I peeled myself and my bike out of the bushes, or the ditch, or the dirt.

After about my seventh time falling off of my bike, I still hadn't given up, but my buddy asked, "Ok, what are you looking at while you're riding?" I told him I was looking at the bushes, and the sharp rock, and the deep ditches, and all the places I could potentially fall if I wasn't careful. He replied, "How's that working out for ya?" We chuckled and he advised, that the key is to place your focus on the path that you want to stay on, versus the one you want to avoid and the outcome will be different. Why didn't he tell me that at the beginning of the bike ride?...

Anyway, we set out on our path again, and this time I only looked at the beaten path in front of me. I only paid attention to where I wanted my bike to go, not where I dreaded it could go.

Do you know what? It worked, my faith worked! It worked in both instances, when I focused my energy on where I did not want to end up, that's where I found myself. When I focused my energy on the path I desired, that's where I also found myself. There is a scripture commonly quoted within my faith tradition "As a man thinks in his heart, so is he..." (Proverbs 23:7). Wherever I seemed to place my thoughts and my focus is where I found myself. Life is full of small lessons and reminders. This bike ride was a reminder to choose my thoughts and my focus wisely, because the mind is a powerful thing, and faith, wherever you place it, truly does work.



An Afghan Air Force pilot receives a certificate during a UH-60 Black Hawk Aircraft Qualification Training graduation ceremony at Kandahar Airfield, Afghanistan, Nov. 20, 2017. The pilot is one of six to be the first AAF Black Hawk pilots. The first AAF Black Hawk pilots are experienced aviators coming from a Mi-17 background. (U.S. Air Force photo by Tech. Sgt. Veronica Pierce)

## First Afghan UH-60 pilots graduate

#### By Tech. Sgt. Veronica Pierce 438th Air Expeditionary Wing Public Affairs

**KANDAHAR AIRFIELD, Afghanistan (AFNS)** --Six Afghan Air Force members became the first ever AAF UH-60 Black Hawk pilots, after graduation from Aircraft Qualification Training during a ceremony at Kandahar Airfield, Afghanistan, Nov. 20, 2017.

Train, Advise, Assist Command-Air advisors and Afghan Air Force leaders were in attendance to congratulate the pilots during this historic ceremony.

"I am happily announcing that today a new page is opening in Afghanistan Air Force life," said Maj. Gen. Abdul Raziq Sherzai, Kandahar Air Wing commander. "In the past years, due to civil wars, our Air force capabilities reached to almost zero. Today we can see, that we are not far from standing on our own feet."

This endeavor is part of a larger modernization program. The Afghan Air Force will more than double their fleet of aircraft over the next seven years. Plans include the introduction of AC-208 attack aircraft and UH-60 Black Hawk assault helicopters, along with additional A-29 attack aircraft and MD-530 attack helicopters.

The first AAF Black Hawk pilots are experienced aviators coming from a Mi-17 background, making the transition from one rotary wing aircraft to another virtually seamless. The six graduates volunteered to be the first to make the shift.

"Today I'm very excited that it is my graduation day," said AAF Capt. Jamshid Rezaye. "I cannot express my feeling right now, because I get to serve the Afghan people."

For future Black Hawk pilots, the UH-60 flight training is approximately 16 weeks long, six weeks for Aircraft Qualification Training and 10 weeks for Mission Qualification Training.

The AAF is expecting to have four qualified crews by fighting season 2018, and 32 crews by fighting season 2019.

Fourteen UH-60 pilots will train at Fort Rucker, Ala., in 2018 with an additional 21 in 2019, and 25 in following years.

Individuals are selected for pilot training based on their qualifications and position vacancies. The two main individual qualifications include flight physicals and English language ability. The transition of airframe for the AAF pilots will provide firepower and mobility, significant offensive factors enabling the Afghan National Defense and Security Forces to break the stalemate against insurgents.

Advisors from TAAC-Air will work with contract support to oversee continuation training in country. TAAC-Air leverages train, advise and assist activities in concert with strong personal relationships, to create professional Afghan Airmen capable of planning, leading, employing and sustaining decisive airpower operations.

"As TAAC-Air we look for three things: capable, sustainable and professional. The Mi-17 is no longer sustainable as it is becoming obsolete," said Lt. Col. Trenton Alexander, 441st Air Expeditionary Advisory Squadron commander. "The UH-60 is sustainable, [allowing] us to meet our three tiers of capable, sustainable, and professional."

AAF modernization is essential for increasing AAF competence, instruction and education with merit-based advancement of its best leaders. Modernization of the Afghan Air Force will mitigate gaps in Afghan aerial fires and lift capabilities.

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Once Afghan pilots graduate and become mission ready, all combat missions will be flown and led by Afghans. Coalition members are not involved in Afghan combat missions, which was not the case a year ago, but today the Afghans do it on their own, according to advisors.

"I congratulate my young and patriotic pilots for this success and completion of their course," Sherzai said. "I'm expecting these young pilots to use these modern and new helicopters, fighting bravely and strongly against the enemy and against terrorists."

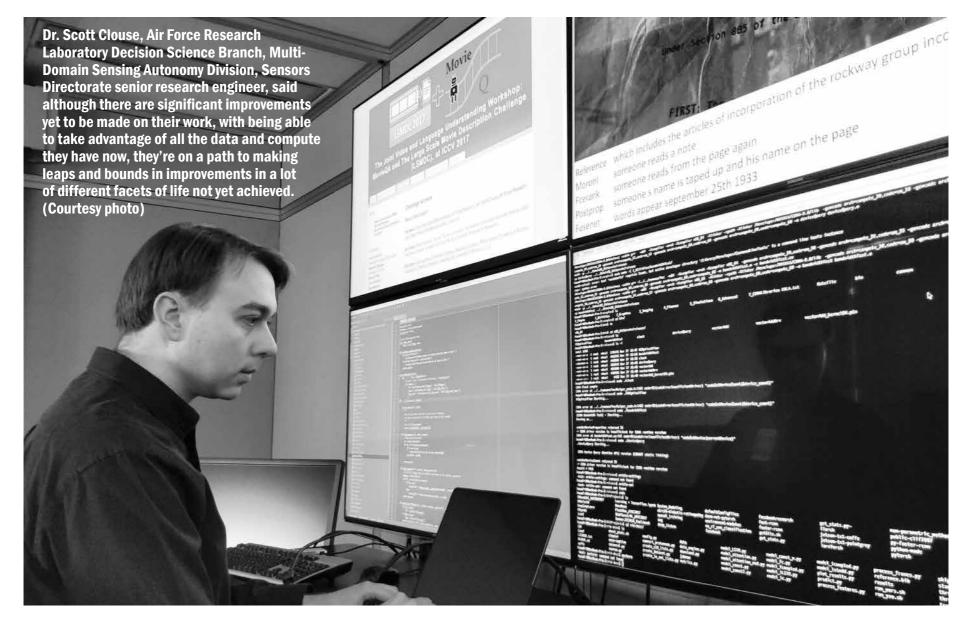
<left> Afghan Air Force Maj. Gen. Abdul Raziq Sherzai, Kandahar Air Wing commander, addresses the first AAF UH-60 Black Hawk pilots during an Aircraft Qualification Training graduation ceremony at Kandahar Airfield, Afghanistan, Nov. 20, 2017. The six pilots are the first to transition from the Mi-17 Hip, as part of a lager modernization program. The AAF is expecting to have four qualified crews by fighting season 2018, and 32 crews by fighting season 2019. (U.S. Air Force photo by Tech. Sgt. Veronica Pierce)

<bottom> Afghan Air Force pilots display their certificates after a UH-60 Black Hawk Aircraft **Qualification Training graduation ceremony at** Kandahar Airfield, Afghanistan, Nov. 20, 2017. The six pilots are the first AAF Black Hawk pilots, which is part of a larger modernization program. The Afghan Air Force will more than double their fleet of aircraft over the next seven years. (U.S. Air Force photo by Tech. Sgt. Veronica Pierce)



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#### December 08, 2017



## AFRL team takes top honors at international Artificial Intelligence competition

#### **By Senior Airman Brittany A. Chase** 35th Fighter Wing Public Affairs

WRIGHT-PATTERSON AIR FORCE BASE, Ohio (AFNS) -- As part of an increased commitment to autonomy research, a team from the Air Force Research Laboratory at Wright-Patterson Air Force Base recently entered and won the Large-Scale Movie Description Challenge at the 2017 International Conference on Computer Vision in Venice, Italy.

"International open competitions such as the LSMDC provide an objective assessment of the latest state-of-the-art in cutting edge Artificial Intelligence technology," said Dr. Vincent Velten, AFRL's Multi-Domain Sensing Autonomy Division Decision Science Branch Technical advisor.

The goal of the LSMDC was to automatically generate a simple one sentence description of the actions or activities that occur in a 4-5 second video clip from a movie. Participants were given access to a training data set of clips and associated human generated sentences and were required to provide an algorithm for independent human evaluation against a blind test set of movie clips.

The AFRL team, comprised of Dr. Scott Clouse, senior research engineer at the Decision Science Branch; Oliver Nina, a PhD student from Ohio State University and also a research intern on a Defense Department Science, Mathematics and Research for Transformation, or SMART, Scholarship for Service fellowship at AFRL; and Nina's advisor, Dr. Alper Yilmaz, also from OSU, were victorious over world leaders in Artificial Intelligence research such as Facebook AI research, the University of Toronto and Ecole Polytechnic de Montreal.

"This result prominently places the AFRL team in the AI research field and demonstrates an advanced technology that is a key enabling component of Air Force autonomy goals," said Velten. "This technique can eventually be used to automate the screening of video streams to alert operators to operationally important events for systems such as Predator/Reaper and Global Hawk."

Nina said humans, in the form of a three-judge panel, evaluated the submitted algorithms rather than computers as in previous years.

For people who are hearing or visually impaired, enjoying a commercial film sometimes requires additional support beyond the traditional format. That may be provided by some kind of accessibility to that media. One of the means of doing that are audio descriptive services that provide sort of an audio book version of the film so people can enjoy it, explained Clouse. The goal of the LSMDC challenge was to produce a system that can turn such a film into this audio description format.

"Currently, they're produced in kind of a theatrical way, just like the film is, where you have writers converting a script or a screenplay into more of a prose format," said Clouse. "The reader then has to be skilled enough to convey the information in a more theatrical type of way. Then the movie dialogue plays along as it would normally, so they kind of have to interject as they go with the film. In addition to the dialogue, you want to describe what's going on. That's the point of descriptive servicess for people, who in particular, are visually impaired."

The point is to generate these services in an automated way to cut down on the cost of generating the capability, explained Clouse.

"Because of the cost and time required to produce these kinds of descriptions, it is not easy to access them for a lot of different films and television shows," said Clouse. "There are a very limited number of these available. It's a very human intensive process to generate these materials so it's the fundamental limitation of the throughput of people. If you can generate them automatically, then you've got a nice description as well as the audio that goes along with the film."

The Air Force would like to similarly produce descriptions of video sequences that are captured from surveillance platforms or any kind of data feed, according to Clouse.

"Video is very popular with the sharp end of the Air Force because people very naturally deal with watching video and understanding what's going on there," added Velten. "However, there is a lot of it and not that many people to do the equivalent of this sort of function for a military application."

Analysts may have to watch 50 hours of video to find 5 minutes of something interesting that's militarily pertinent and matters for intelligence purposes or even for doing a special operations mission rehearsal, said Velten.

"This sort of technology would allow us to index clips, like you would in a library, and just show us the interesting parts. The nice thing is that there's a civilian analogue to it and so there is a lot of great civilian research and the AFRL team showed they are at the forefront of that. The real motivation for the military is to be able to sort through enormous amounts of video and describe actions that are going on," said Velten.

The team worked with 101,000 short video clips that were provided for this year's competition. The algorithm they developed takes the video clips and produces a sort of abstract summary that is then translated into human-readable phrases.

"A great deal of computer crunching was required to do this and the team was able to use the super computer called Thunder at AFRL's Defense Department Supercomputing Resource Center," said Velten.

Thunder is part of the DoD High Performance Computing Modernization Program. Velten added that without Thunder, the research would not have been possible.

"We're trying to mimic what the brain is

doing," said Nina. "We can help the blind, or the visually impaired. Together we can reach great goals to help humanity and to help the Air Force defend our country."

Clouse indicated there are many significant improvements yet to be made, but with being able to take advantage of all the data and compute they have now, there's a path to making leaps and bounds in improvements in a lot of different facets of life not yet achieved.

"The whole point is to produce systems that can have more human-like qualities in terms of their ability to not only produce output from fairly limited input, but also to produce output that human beings can trust. This is a very difficult problem.

"Obviously, this has enormous defense applications, but even larger societal and commercial applications. There are some potentially very impressive things right around the corner," said Velten.

## **Evolution of the Airman Safety App**



#### By 36th Wing Public Affairs

**KIRTLAND AIR FORCE BASE, N.M. (AFNS)** -- The evolution of the Air Force Safety Center's Airman Safety App reached an important milestone with recent software updates Dec. 1, 2017.

This simple, web-based tool provides a streamlined process for all Airmen, their families and anyone accessing the base to report safety issues as they encounter them.

"The Air Force wants to utilize every Airman as a sensor to identify hazards in their workplace and throughout the installation," said Col. William Culver, Air Force chief of Aviation Safety. "The aviation community, both commercial and military, has been doing this for many years and now we can take those best practices across all safety disciplines".

With this update, the Air Force will use the

Airman Safety App to leverage the expanding Aviation Safety Action Program voluntary reporting capability. This includes aircrew operations and logistics/maintenance safety issues and events. The transformation – "Aviation" is expanding to "Airman".

Airmen will also have access to the latest hazard reports through active messaging and an ASAP Scoreboard located in the Air Force Safety Automated System database.

Another improvement links the Airman Safety App with a new hazard management module in AFSAS enabling safety professionals to track and mitigate reported hazards.

"Supporting features were upgraded in AFSAS to increase the application's capability," said Douglas MacCurdy, acting chief information officer and chief of Information Technology and Cyberspace Operations. "Air Force safety professionals now have a hazard management tool capable of cradle-to-grave identification and risk mitigation of safety issues".

The Airman Safety App opened the door to a new way of limiting and eliminating safety hazards, like exposed electrical wires in the workplace, and road hazards around each and every installation while providing a substantial amount of data essential to proactive mishap prevention and effective risk management.

The application is accessible anytime, anywhere and with almost any device – desktop, laptop, tablet or smart phone – and focuses on minimizing the most common obstacles, making reporting quicker and easier to accomplish.

Initiating the reporting process is easy, just access the Airman Safety App online at https:// asap.safety.af.mil and select the Airman Safety Action Report icon.



An MQ-9 Reaper flies a training mission Oct. 18, 2017, at Creech Air Force Base, Nev. MQ-9 and MQ-1 Predator aircrews helped liberate Raqqah, Syria, from the Islamic State of Iraq and Syria's control in early October 2017. ISIS used the city as its capital for terrorist operations since January 2014. (U.S. Air Force photo by Senior Airman Christian Clausen)

## **Combat RPAs integral in defeating ISIS**

#### By Senior Airman Christian Clausen 432nd Wing/432nd Air Expeditionary Wing Public Affairs

**CREECH AIR FORCE BASE, Nev. (AFNS)** -- U.S. forces, coalition partners and Syrian Democratic Forces liberated Raqqah, Syria from the Islamic State of Iraq and Syria's control in early October 2017. ISIS used the city as its capital for terrorist operations since January 2014.

Combat remotely piloted aircraft such as the MQ-1 Predator and MQ-9 Reaper were heavily integrated during combat operations to liberate the city. RPA aircrews tirelessly flew more than 44,000 hours and employed approximately 20 percent of the coalition strike effort.

The final push to free Raqqa city and eliminate ISIS strongholds started in June 2017. In less than five months the ground forces captured the city. During that time, combat RPA aircrews leveraged their persistence by giving a continuous bird's-eye view of the battlefield while providing precision weapons strikes.

"Primarily, we were doing things like close air support, tactical reconnaissance and overwatch of our allies as they fought to take back the city block by block," said Lt. Col. Nicholas, a squadron commander assigned to the 432nd Wing. "What our aircraft brought that was unique to the fight was persistence. We were over the city around the clock and that allowed us to have detailed knowledge of where the friendly forces were as they progressed."

When ground troops encountered ISIS fighters, MQ-1 and MQ-9 aircrews were able to guide weapons from another aircraft to the target, a tactic known as buddy lasing, or strike with their own precision munitions, oftentimes within close proximity to friendly forces.

"We were there to provide fire to break that contact [sustained by the friendly forces] and allow them to either advance or retreat to a safer location," Nicholas said. "Many times we employed in danger-close situations within meters of friendly forces because it's a confined city."

According to Nicholas, this urban CAS environment is where the advantages of using MQ-1 and MQ-9 capabilities are more apparent as aircrews can maintain visual contact before, during and after strikes.

While operating in a dense urban environment is difficult according to the crews, they also overcame other challenges to get the job done.

"Raqqah was different in the sense that we were trying to enhance our operations and bring lessons learned from other fights to this one," said Senior Airman Chandler, 432nd Wing sensor operator. "It was very dynamic and there were many partners around, so there was a lot of airspace coordination. What really stuck out, however, was that ISIS was trying harder to blend in." As Syrian forces cleared structures in the city, combat RPA aircrews frequently witnessed civilians fleeing to coalition and partner ground forces, who escorted them to safety.

"It wasn't our aircrew just striking ISIS targets," Nicholas said. "We also were safeguarding and watching over [Syrian Democratic Forces] as they cleared civilians moving out of the city to safe locations."

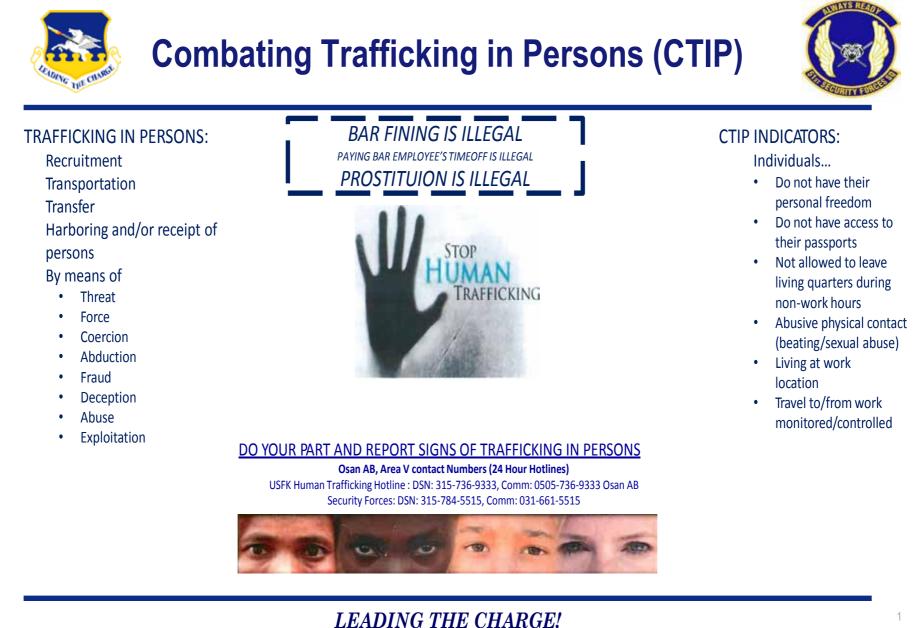
It's reasons like this why Chandler believes that combat RPAs made a real difference in this operation.

The city of Raqqah has been liberated, however, according to the Combined Joint Task Force Operation Inherent Resolve, there is still work to be done in parts of Iraq and Syria to fully eradicate ISIS forces from the battlefield.

"My favorite part of this job is that I'm able to help civilians be safe and I'm able to help liberate whatever city we need to. There's no better feeling than knowing you can directly impact the battlefield and other people's lives," Chandler said. "It's a huge responsibility, but it's extremely rewarding."

"There are families in the Middle East who are returning home free from ISIS control in part due to the 432nd [AEW] 'Hunters," said Col. Julian Cheater, 432nd Wing/432nd AEW commander. "I couldn't be more proud of our Airmen. Day in and day out, they stand ready at our nation's call and every day they continue to deliver justice."

## rimson Sky



Combined Federal Campaign verseas:



epartment of Defense (DoD) employees worldwide can support their favorite charities from October 2017 to January 2018 by participating in the 2017 **Combined Federal Campaign** Overseas (CFC-O). The mission of the Combined Federal Campaign is to promote and support philanthropy through a program that is employee focused, cost-efficient, and effective in providing all federal employees the opportunity to improve the quality of life for all.

CFC is the world's largest and most successful annual workplace charity campaign with 36 CFC zones located everywhere federal employees work. Last year, military and civilian employees contributed more than \$167 million to almost 20,000 local, national and international charities. Once again this year, DoD employees worldwide have the opportunity to give to their favorite charitable cause during the CFC giving season from Oct. 2, 2017 to Jan. 12, 2018.

Our Help is Needed:

- During the next four years, it is expected that 250,000 service members will transition into civilian communities, annually. - One in ten homeless adults is

a veteran.

- Since 2001, more than two million American military children have had a parent deploy at least once.

- Deployed veterans are 41 percent more likely to commit suicide when compared to the general U.S. population.

We have 80+ Key Workers throughout the Unit in 51 FW and they would be able to help you fill out the either paper copy or online pledge form. If you do not know your Key Worker in your unit, please contact your Community Area Project Officer (CAPO) TSgt David Chun (david.chun@us.af.mil) or TSgt enjamin Wiseman (benjamin. wiseman.3@us.af.mil) and they will be more than happy to assist.

What is your cause? Show Some Love!

## Airman lunges for knockout debut

By Senior Airman Christopher Maldonado, 20th Fighter Wing Public Affairs

**SHAW AIR FORCE BASE, S.C. (AFNS)** -- Drenched in sweat from delivering continuous blows to a punching bag, the athlete shrugs off the physical strain of a three-hour training session, feeling both exhausted and accomplished.

A Florida native, Tech. Sgt. Andre Penn, 20th Civil Engineer Squadron unaccompanied housing manager at Shaw Air Force Base, South Carolina, has been preparing for more than a decade to achieve his dream of becoming a professional boxer.

"I started boxing when I was 16 years old," said Penn. "I played basketball, football and track. I did it all, but I loved the individuality of boxing, because in basketball you have a teammate that can miss the ball and it's their fault. In boxing, it's all on you."

Excited by the thought of controlling his own destiny, Penn carried his passion for the sport to his first amateur boxing match at the age of 17.

"My very first fight was almost 17 years ago in Alabama," said Penn. "I was really nervous and didn't know what to expect."

Fortunately, Penn stated, listening to his coach's insight helped him to be successful in that match, ensuring every command was executed flawlessly.

With newly-found confidence acquired after winning his first match, Penn went on to join the Air Force.

"After a year of being out of high school, I finally joined," said Penn. "My dad was in the Air Force and that was a big reason why I joined the military."

Penn said the Air Force opened up a lot of opportunities for him.

In 2006, just two years after enlisting in the Air Force, he went on to join the Air Force boxing team.

"Joining the team was a goal that I had coming in to the Air Force," said Penn. "There were a couple of guys at my gym that were on the team, so I knew about the Air Force boxing team prior to joining the military."

Penn quickly established himself as a formidable force, becoming a three-time Air Force Boxing Team middleweight class champion from 2006 to 2008. Penn, however, had his sights even higher and decided to apply his victories to a professional boxing career.

In order to perform his job as an unaccompanied housing manager and find time to train, Penn knew he had to make sacrifices and push his body to the limit and prepare for the first fight of his professional boxing career.

"If you have a passion for something, you will find a way to make it happen," said Penn. "Sometimes I stay up late at the gym until about 11, sometimes I get up early or, if it's necessary, I'll sometimes even have to train during my lunch break. The training leading up to the fight is the hardest part, the running, the sparring – it takes a toll after working eight or nine hours a day, but once it's fight night, it's time to show everyone what all this training was for."

On top of all the training, Penn needed to lose more than 10 pounds in order to reach the middleweight class of 168 pounds.

Penn's training hit a roadblock in the form of a possible vision disqualification that delayed his boxing application.

"There was a problem with my eyes that I needed to get cleared before I could finish my application to box," said Penn. "At the end of the day I needed to get this cleared so I could finally get to the big fight." At first he was on edge, but then he went to an optometrist and was cleared to participate in the match.

With a clean bill of health, Penn went immediately back to it, working with multiple trainers to prepare for his first professional match on Nov. 18, 2017.

"We have worked on a lot of cardio, strength training, boxing drills and pad work," said Jerome Robinson, Team Robinson Mixed Martial Arts owner. "He is truly dedicated to training hard and ensuring that he is in tip-top shape."

Robinson went on to say that Penn traveled to other gyms in Columbia, South Carolina and Florence, South Carolina, to obtain an assortment of training. As the fight approached, the feeling of accomplishment was nearly in his grasp. Penn cleared his mind before walking down the ramp.

"Be smart, trust your training and dominate your opponent every second of every round," said Robinson to Penn days before the fight.

After a 66 fight, 17-year amateur boxing career, Penn finally heard from the loudspeaker: "Starting in the red corner, this fighter weighs in at an official 168 pounds. Tonight he wears white trunks with a black trim. He was a three time all Air Force middleweight champion as a member of the Air Force boxing team ... introducing Andre 'The King' Penn!"

Four rounds and many hits later, Penn began his professional boxing career with a victory and professional 1-o record. Through excellence in his craft, Penn plans to continue to overcome and battle through any challenges that come his way in and out of the ring.

## EVENTS



## **Exciting** 2017-2018 Minter Festivals

Winter in Korea means plenty of festive gatherings, from Christmas to New Year's Eve parties. As December comes to an end and the year draws to a close, people gather at sunrise festival locations across Korea to welcome in the first sunrise of the New Year. January and February are perfect for reveling in the chilly weather by visiting snow and ice festivals. Each region has its own unique winter culture and specialty products, for endless opportunities to enjoy an active winter in Korea.



#### Boseong Green Tea Plantation Light Festival

The magical allure of the Boseong Green Tea Fields grows tenfold in winter as bright Christmas lights cast a cheery glow over the expansive fields. The themed spaces and exhibits bring "Christmas decorations" to a whole new level.

**Period:** December 15, 2017-January 14, 2018 **Location:** Areas of Yulpo Beach and Korea Tea Culture Park, Boseong-gun, Jeollanam-do (Korea Tea Culture Park, 775, Nokcha-ro, Boseongeup, Boseong-gun, Jeollanam-do)

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#### Lighting Festival at The Garden of Morning Calm

Held at the Garden of Morning Calm, the Lighting Festival is one of the biggest festivals of lights in Korea, covering nearly 330,000 m<sup>2</sup> with lights. The gleaming lights add a festive glow to the natural beauty of the garden during the winter season.

**Period:** December 8, 2017-March 25, 2018 **Location:** The Garden of Morning Calm, Gapyeong-gun, Gyeonggi-do (432, Sumogwon-ro, Sang-myeon, Gapyeong-gun, Gyeonggi-do)



#### Inje Icefish Festival

At Inje Icefish Festival, visitors can enjoy ice fishing and other exciting programs such as ice sledding, a large icefish sled, and snow slides. All the icefish caught by participants can be served as hoe (sliced raw fish) or deep-fried for a warm treat.

**Period:** January 27-February 4, 2018 **Location:** Area of Bingeoho Lake, Inje-gun, Gangwon-do (555-2, Bupyeong-ri, Nam-myeon, Inje-gun, Gangwon-do)

#### **Pyeongchang Trout Festival**

At Pyeongchang Trout Festival, visitors can cut a hole through the ice covering the frozen river to catch their own fish. Other fun events to try include bare-handed fishing, sledding, and more! The festival is also close to Alpensia Ski Resort and Yongpyong Ski Resort, official venues of the PyeongChang 2018 Winter Olympic Games.

**Period:** December 22, 2017-February 25, 2018 **Location:** Area of Odaecheon Stream, Pyeongchang-gun, Gangwon-do (3562, Gyeonggang-ro, Jinbu-myeon, Pyeongchanggun, Gangwon-do)





#### Taebaeksan Mountain Snow Festival

Taebaeksan Snow Festival offers guests an array of events and activities that are sure to amuse and entertain everyone. In addition to performances and exquisite snow sculptures, visitors can participate in snow sledding with the beautiful Taebaeksan Mountain covered with snow as their backdrop.

**Period:** January 19-February 11, 2018 **Location:** Areas of Taebaeksan National Park and Hwangji Pond, Taebaek-si, Gangwon-do (162, Cheonjedan-gil, Taebaek-si, Gangwon-do)eup, Boseong-gun, Jeollanam-do)