THE DISPATCH

U.S. ARMY DUGWAY PROVING GROUND

VOLUME 5, NUMBER 10 | www.dugway.army.mil | October 2019

INSIDE YOUR DISPATCH

Dugway tests CENTAUR array to detect CBR threats overseas

By Al Vogel
albert.c.vogel.civ@mail.mil

A combination of detection, monitoring and communication equipment – working together to warn of impending chemical, biological or radiological (CBR) threats – was recently operated at Dugway Proving Ground to obtain feedback from Soldiers who will use the system for base protection overseas. This marks the first time a combination of such equipment, operating as a system, has been tested at Dugway.

The system is called CENTAUR – Capabilities to Enable Threat Awareness, Understanding and Response – an array of command and control equipment, force protection components and chemical and biological point and standoff detectors (point detectors are exposed to the agent cloud they detect, while standoff detectors use lasers to "see" the cloud at a distance, avoiding exposure).

The testing had two purposes: Integration assessment, then a User Feedback Event (UFE). Integration assessment verified that the system 1) collects data from the individual sensors, 2) transmits it to a central hub 3) provides analytics on the sensor data to improve accuracy and reduce false alarms, and 4) visualizes the information for the user on a common operating picture (map). Later, the integration assessment allowed the technicians to tweak the flow of sensor data to visualized information. This optimizes the message that each operator receives, and the overall message the system sends about the battlefield.

Some systems comprising the CENTAUR, in the field. An instrumentation tower supports the test, while a combination of CENTAUR detection, monitoring and communication equipment is challenged with simulated chemical biological or radiological (CBR) threats. The CENTAUR system was also tested by Soldiers challenged by real-world scenarios, requiring them to make real-time decisions based on what CENTAUR provided. Photo by Mario Sandoval / Dugway Optics

The UFE replicates a real-world event. The visiting Soldiers operated as they would overseas, out of an emulated Command & Control center. They made real-time decisions based on the information that the CENTAUR system provided. They were able to learn the system and make recommendations for improvement.

The Soldiers' recommendations will support a later report on CEN-

♦ CENTAUR array. Page 2.

Command perspective

By Aaron D. Goodman

Garrison Manager, USAG, Dugway, Utah

We work in a challenging environment that requires constant innovation and effective communication. Every day we make decisions or coordinate with others to shape the future of critical missions and community needs. With reductions in people and funding, creativity is required to meet our needs. During this window of time, we face the challenge of being open to innovative solutions or exploring ideas that failed in the past, but could be successful today. I myself have challenges with this at times, when I have seen ideas that didn't work before and cost time, money, and collective effort. We are all subject to our experiences. It's what helps us make decisions, grow as leaders, and help share information with others to be successful. However, if we are not careful, we can allow history to hold us back from supporting innovation or trying something new. It can also stop great ideas before they get to decision makers. Now more than ever we must challenge our assumptions on innovation and continue to be open to concepts that help us achieve our goals within the mission areas and community.

The second part of innovation is communication. What we say matters and can be a catalyst for incredible support of growth or the nail in the coffin for ideas that may have made a great difference. Communication is something we must all strive to improve in and we all learn and process information differently. So unless you are clairvoyant, it's important to take the time to understand how your words and communication methods are best received by your audience. Get to know your colleagues and what they value. Understand that every word counts and shutting down creativity or open communication on ideas does not help anyone. Find ways to say yes to innovation and support collective success.

We are all in this together There is no one more creative, capable, or team oriented than our amazing workforce and community. Inspiring new ideas and encouraging others to step forward takes motivation and a commitment to success. It also takes great open communication that is productive, respectful, and in line with our Army Values. Together we will continue to innovate, communicate, and succeed. I'm excited about our future and can't wait to see where the future takes us as Team Dugway!

CENTAUR array ...

Continued from page 1.

TAUR's capabilities and limitations, for use by Soldiers and civilians in support of force health protection. The overall goal is to enhance and expedite the force health protection decision-making process for installation commanders. CENTAUR does this by integrating essentially different force protection and CBR sensors into a single operations station, and applying advanced algorithms for high-fidelity situational insight to the Warfighter.

In simpler terms, it allows the Warfighter to know exactly what is going on during a CBR incident.

Some systems within CENTAUR are commercially available, others are not, but all are in current use by the Department of Defense.

"We've taken sensors that are already proven, individually, in their own commodity area. Some haven't been used for a chemical or biological mission, but all the capabilities combined have more value than each sensor or system alone," said Andrew Murphy, Deputy Joint Product Leader for CBRN Integrated Early Warning, from the Joint Program Executive Office – CBR and Nuclear Detection. An example is the force protection system of CENTAUR, which has long-range thermal imaging cameras, standard pan and tilt video cameras and ground surveillance radar.

A portable instrumentation trailer, with fold-down 10-meter tower, makes setup and testing easier. CENTAUR was expected to receive 30 trials of different simulants, but 53 trials were conducted, thanks to an exceptional test crew and ideal weather conditions.
Photo by Mario Sandoval/ Dugway Optics

Simulated chemical or biological agents were used exclusively for the three weeks that CENTAUR was tested, and Warfighters from overseas participated in real-time scenarios to evaluate the system. Seen here are disseminators on a trailer, for easy movement in the field to place the simulated agent cloud upwind of the detectors. Some test trials include interferents such as dust and smoke, to ensure detectors are not affected by other substances in the air. Photo by Mario Sandoval/ Dugway Optics

"This effort is instrumental in demonstrating a modernized CBR capability to the Warfighter, as well as providing an initial CBR Battlespace awareness capability for the force, " Murphy said.

He noted that the employment and continued development of this capability may reduce the time required for Warfighters to make decisions, from minutes or hours, when in the past it may have taken days or weeks.

CENTAUR was challenged outdoors with simulated agent, always at night, Murphy noted: the atmosphere at night is the most consistent and reliable for the use of simulants to trigger the systems. For two weeks, 35 interferent, chemical, and biological simulant disseminations were conducted (interferents are substances, such as smoke or dust, that might affect the detector's accuracy), followed by one week of User Feedback demonstration. A total of 53 trials, always with simulant but not always with interferents, were conducted. The test objective was 30 trials.

An Army major who was exercise manager for the UFE said a big benefit of CENTAUR is that its data may be moved along in a standard format. He expected that eventually data would move along satellites.

"This is important, because there are factors out there that can create nuisance alarms," he said. The major envisioned CENTAUR eventually on Unmanned Aerial Vehicles, sampling the center of a suspected threat or monitoring suspicious activity.

"The test exposed a lot of issues we need to work on, and we were able to use it to help drive early discussions in the design cycle," the major said.

A lieutenant colonel from Army Headquarters said the tests have, "Been value added to the Army crew (who came here from overseas), to understand how CENTAUR can mitigate some of the challenges or risks they may face."

Shawn Funk, whose specialty is deployment of the CENTAUR system in support of base defense, has visited Dugway repeatedly for tests. He most enjoys the scale of testing that can be done within its 800,000 acres, where sensors may be placed miles apart. One scenario had CENTAUR trying to detect which of multiple trucks were releasing biological simulant as the trucks entered a monitored area. He couldn't reveal the results, but was pleased that Dugway had the immensity to allow the scenario with actual vehicles.

"This is the only place we can come and get this kind of scale to get good system feedback," Funk said.

CHAPLAIN'S CORNER

By Chaplain (MAJ-P) Shawn P. Gee

Spiritual Resilience

Faith builds resilience in our lives. According to Michael Rutter, resilience ". . . seems to involve several related elements. Firstly, a sense of self-esteem and self-confidence; secondly, a belief in one's own self-efficiency and ability to deal with change and adaption; and thirdly, a repertoire of social problem solving approaches." We can experience spiritual resilience through worship and meditation/prayer. Through worship, our spirituality - our sense of belonging to God completely is important in coping with anxiety and building resilience. Times of praise and worship with groups of people is uplifting and rejuvenating. There is therapeutic power in listening to inspirational music during a worship service. Additionally, when dealing with life's challenges, it is often helpful to take time out for worship and refocus our attention on the ultimate "Problem Solver" who is greater than any of our stress.

We experience spiritual resilience through prayer and meditation, as well. In Matthew 14, Jesus learns that his cousin, John the Baptist, has died. When Jesus hears the news, he withdraws by boat to a deserted place. It is understood when Jesus withdraws to rest that he will spend time in prayer. But when the crowds hear the news they come looking for Jesus. As Jesus comes ashore, he demonstrates spiritual resilience by curing their sick and feeding the five thousand. It is important to note that Jesus' spiritual resilience is precluded by retreat into solitude. Then after the feeding, Matthew 14:23 says Jesus went up the mountain by himself to pray. Early the next morning, the disciples were in a storm at sea. Jesus walked toward the disciples on the water and calmed the storm. Again, Jesus' demonstration of spiritual resilience (calming the storm) is precluded by quiet time in prayer. Clearly, there is a lesson to be learned from Matthew 14. Jesus demonstrates that authentic spiritual resilience can only be an extension of a life of prayer. Jesus models a battle-rhythm for spiritual resilience. It looks like this: PRAYER/ SOLITUDE --> FEEDS 5,000 --> PRAYER/SOLITUDE --> CALMS STORM

Like Jesus, we too may need to feed the crowds but we also need to have our own souls fed and nourished. Powering-up in prayer is essential for spiritual resilience. For Henri Nouwen, prayer is the source of our power. He says: "Every time you listen with great attentiveness to the voice that calls you the Beloved, you discover within yourself a desire to hear that voice longer and more deeply. It is like discovering a well in the desert. Once you have touched the fertile ground, you will want to dig deeper. This digging and searching for an underground stream is the discipline of prayer."

Ditto Jeep Donated to Military Museum

The vintage U.S. Army Jeep that sat outside the Rothenberg Building for more than 10 years has found a new home. The Jeep was donated last month to the Harrah Military Museum.

Lt. Col. Douglas Tamilio, commander of the West Desert Test Center (WDTC) from 2006 to 2008, had the Jeep placed outside the Rothenberg Building, which serves as the WDTC headquarters building. It's believed the M151A1 1/4-ton Jeep was removed from a firing range, where it was destined to be a target.

Dugway's Command Staff is looking to replace the Jeep with a piece of equipment that is more relevant to DPG's mission.

Photo by Al Vogel, Dugway Public Affairs

Congratulations RIAC!

By Al Vogel
albert.c.vogel.civ@mail.mil

Sept. 23, 2019 marked the 10th anniversary of the Rapid Integration Acceptance Center's (RIAC) first official day of operation. RIAC was established by the Program Manager for Unmanned Aircraft Systems, headquartered at Redstone Arsenal, Alabama. At Dugway, RIAC works closely with Dugway and the Army for the improvement of Unmanned Aircraft Systems (UAS).

It was created to establish a single location where current and potential UAS could be tested thoroughly and quickly before issue to the Warfighter. Entire systems or improvements to existing ones, are challenged. RIAC benefits from Dugway's remoteness, fewer radio frequencies, restricted airspace up to 58,000 feet, minimal public proximity and low precipitation.

Among RIAC's many mileposts: development of a RIAC flight team to operate the Shadow UAS for a myriad of tasks; MUSIC test, in which pilots remotely took control of airborne UAS for various tasks; a test to identify chemicals and buried objects, first Hellfire missile shot from a Warrior UAS, testing of a system to destroy enemy UAS, a Gray Eagle Extended Range model flown for 42.5 hours – and many more.

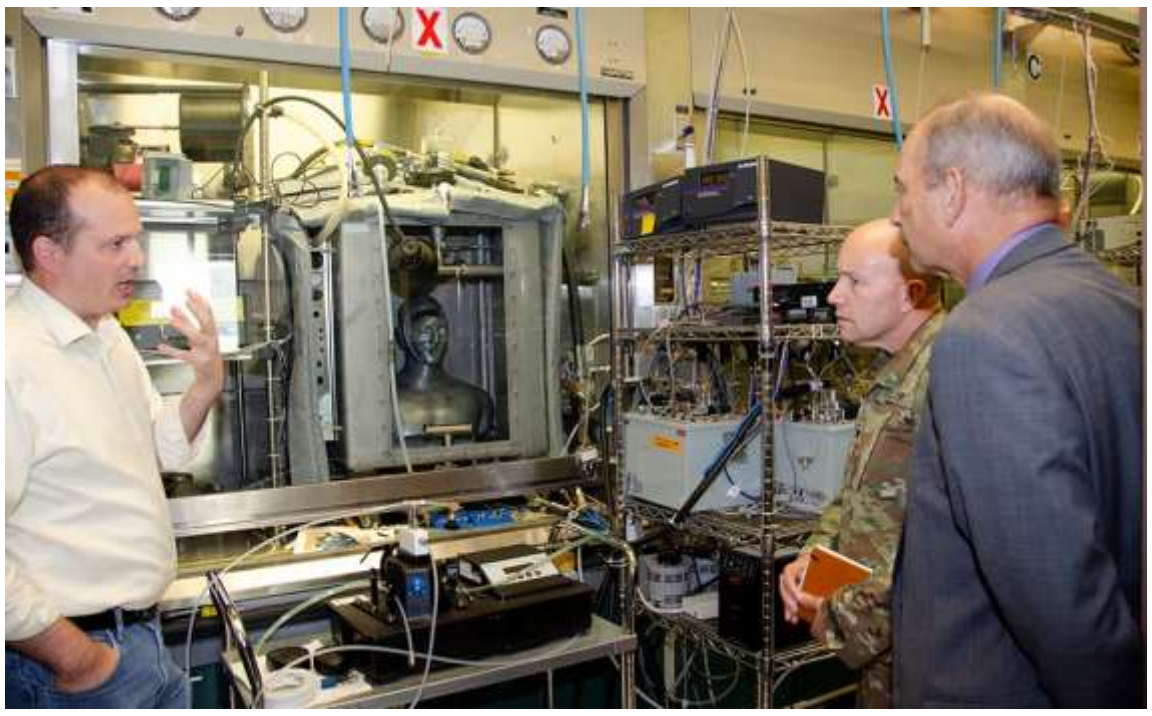
The most sorties (operational military flights) flown at RIAC was in 2015, with 21,764 sorties. The fewest were 10,128 in 2011 (2009 and 2010 were formative years). In 2018, there were 12,816 sorties.

Ribbon cutting for first operational day of RIAC – Sept. 23, 2009. Then Col. William King, second from right, commander of Dugway Proving Ground. He was among local leaders who eagerly sought a center to test Unmanned Aircraft System. U.S. Sen. Orrin Hatch (R-Utah) was also greatly instrumental in having the RIAC test center brought to Dugway, based on the advantages it would find here. Photo by Al Vogel, Dugway Public Affairs.

The Rapid Integration and Acceptance Center team. Front row, left to right: Kim Shaffer, Kerry Barraclough, Bridger Steele, Nate Critchlow, Jenny Gillum. Middle: Nicole Lint, Dan Antry, Evan Slade, Kevin Protz, Heather Clegg, Clarence Chapman. Rear: Tyler Anderson, James Crank, Ray Zamora, Doug McDaniel, Ron Delgado, Carl Perhson. Not pictured: Kate Jurinko and Greg Johnson. Middle row: Nicole Lint, Dan Antry, Evan Slade, Kevin Protz, Heather Clegg and Clarence Chapman. Rear row: Tyler Anderson, James Crank, Ray Zamora, Doug McDaniel, Ron Delgado and Carl Perhson. Not pictured: Kate Jurinko and Greg Johnson. Photo provided by RIAC.

First operational day of RIAC – Sept. 23, 2009. The event brought numerous workers, VIPs and media, who enjoyed watching a few representative Unmanned Aircraft Systems take off. Photo by Al Vogel, Dugway Public Affairs

White Sands Commander visits Dugway



Bryan Fausett, chief of the Chemical Operations branch of Dugway Proving Ground's Chemical Test Division (left), explains how gas masks and respirators are tested on the SMARTMAN mannikin in a sealed chamber. Right: Col. David Trybula, Commander of White Sands Missile Range (WSMR) in New Mexico, and SES Richard Meador, Executive Director of WSMR, toured Dugway Sept. 25 and 26. Photo by Darrell Gray, Dugway Public Affairs

Col. David Trybula, Commander of White Sands Missile Range (left) and SES Richard Meador, Executive Director of WSMR, toured Dugway Proving Ground Sept. 25 and 26. Among the facilities visited were the Combined Chemical Test Facility, Bushnell Materiel Test Facility, Mustang Village at Wig Mountain, BioTesting Division, Michael Army Airfield, RIAC, English Village fire station, Community Club and Army Community Services. Photo by Darrell Gray, Dugway Public Affairs

CTD earns international certification

By Stephen Minor, ISO Coordinator
steven.a.minor.civ@mail.mil

Dugway Proving Ground (DPG) has been in the business of testing for more than 75 years. From its beginnings in 1942, DPG has always been associated with chemical/biological defense. In 2019, DPG attained an internationally recognized certification for its chemical defense testing. This certification is with the International Organization for Standardization, and is designated as ISO 17025:2017.

ISO 17025 enables laboratories to demonstrate that they operate competently and generate valid results, thereby promoting confidence in their work both nationally and around the world. It also helps facilitate cooperation between laboratories and other bodies by generating wider acceptance of results between countries. Test reports and certificates can be accepted from one country to another without the need for further testing.

The Chemical Test Division (CTD) of the West Desert Test Center (WDTC) is accredited to produce reports on the chemical purity and gas chromatography of agent solutions and vapors. These can be done with precise scientific instruments like the Nuclear Magnetic Resonance Spectrometer (NMR), MINICAMS and gas chromatography.

To get the ISO certification application process underway, a cadre of procedures and forms had to be created that would both codify what CTD was already doing and satisfy the 17025 standard. To do this, two teams were created with the specific tasks of tackling the two chapters within 17025: administrative and laboratory. The administrative portion was developed by an interdivisional team consisting of Stephen Minor, Darren Jolley, Scott Wendt, Ryan Weaver, Alison Kendrick, Brendt Sigvardt, Sarah Austin, Laurence Adair, and Norman Lian. The laboratory portion was tackled within the CTD by Darren Jolley, Ed Thron, Steve Brimhall (retired), Gary Moffett, Wes Ercanbrack, Bruce Gilbert, Larry Russon, Richard Phan, Matt McCarty and Mark Marusa. It is because of these dedicated people that CTD achieved the ISO 17025 accreditation.

An ISO 17025 accreditation gives CTD international credibility as allied countries come to DPG to conduct their chemical testing. Additionally, any customer will gain the assurance that the data produced is done in a standardized and reproducible manner. This also has the effect of reducing errors and costly mistakes with regards to the data produced under this accreditation. CTD is the first division at Dugway to gain this noteworthy accreditation. There are plans to have field testing and DPG's environmental conditioning chambers accredited. This will increase the world-class visibility of the WDTC, and give our warfighters the equipment that can stand up to the test.

EMPOWERING THE NATION'S DEFENDERS

The Holiday Inn Express Desert Lodge recently held an open house to celebrate its new name and recent renovations. Hotel General Manager, Kathryn Metcalf showed off a renovated room to (from left) Garrison Manager Aaron Goodman, Command Sgt. Maj. Kyle Brinkman, DPG Commander Col. Scott Gould, and Deputy Garrison Manager Brian Jost during the open house event.

OCTOBER IS CYBER SECURITY AWARENESS MONTH

October 2019 is Cyber Security Awareness month. In preparation for this event, the Dugway Proving Ground Network Enterprise Center Cyber Security Division would like you to try and answer these questions. Our next Command Cyber Readiness Inspection (CCRI) will be a "no notice" inspection at Dugway, and we anticipate it happening within the next 8 to 12 months. Your vigilance in protection of our networks will be paramount to our success against those adversaries which mean do us harm, and to ensure we are well prepared for this inspection.
Thank you!

Question 1.
Which of these precautions can you take to make your family safer from online threats?
A. Always keep anti-virus software current.
B. Regularly apply any available updates and patches for your home computer.
C. Have regular conversations about phishing and other online threats.

Answer: All choices are correct.

Explanation: All members of the public can take some basic actions to protect themselves online and to recover in the event that a cyber incident occurs. Being alert for phishing emails, applying any updates for your computer system, and keeping your anti-virus software current are all valuable precautions to take to not become a victim of cybercrime.

Question 2.
Select the possible, detrimental actions that can occur as a result of a single phishing attack:
A. The adversary can steal files with sensitive data.
B. Computer virus could be released onto the network.
C. The adversary can establish a remote connection.

Answer: All choices are correct.

Explanation: A single phishing attack can lead to many negative effects. These include stolen files and sensitive data, the collection of PII, the execution of remote commands, and the advisory establishing remote connections to an official network. It is important to recognize phishing attempts to minimize the likelihood of being attacked and the loss of data. Always look for digital signatures on DoD enterprise email. Never open links or attachments within questionable emails and immediately report potential phishing emails to your organization's Security Officer.

Question 3.
Internet of Things (IoT) devices are becoming a feature of everyone's daily life. What cybersecurity precautions should you keep in mind in using IoT devices?
A. Make sure you understand the cybersecurity vulnerabilities for each IoT device.
B. Learn how to set the IoT devices for the maximum cybersecurity protection.
C. Make sure you know the cybersecurity features available for each device (i.e., security settings/patches/upgrades).

Answer: All choices are correct.

Explanation: People today are in the midst of an enormous technological change that will change our lives drastically forever! Technological devices affecting almost every part of our lives are here, from household appliances to aircraft. Automated sensors and controls that we interact with daily have become known as part of the Internet of Things (IoT), used to secure our homes, adjust home temperatures from afar, monitor our health/fitness, and control smart buildings. Using this technology comes with great risk. Malicious use of these devices can cause harm. We could be in a position where a determined adversary could shut down our power and water infrastructure, turn off security systems, disrupt our ability to provide medical care, listen to our conversations, and monitor our movements.

For more information on CYBER SECURITY AWARENESS MONTH contact the NEC Information System Security Manager at (435) 831-7103.

IN A NUTSHELL

ARMY MUSEUM SET TO OPEN IN JUNE 2020

The National Museum of the United States Army will open to the public on June 4, 2020. It will be the first and only museum to tell the 244-year history of the U.S. Army in its entirety. Now under construction in Fort Belvoir, Virginia, the museum will be open to the public with free admission.

The museum will tell the Army's story through Soldier stories. The narrative begins with the earliest militias and continues to present day.

"The Army has served American citizens for 244 years, protecting the freedoms that are precious to all of us. Millions of people have served in the Army, and this museum gives us the chance to tell their stories to the public, and show how they have served our nation and our people," said acting Secretary of the Army, Ryan D. McCarthy.

In addition to the historic galleries, the museum's Army and Society Gallery will include stories of Army innovations and the symbiotic relationship between the Army, its civilian government and the people. The Experiential Learning Center will provide a unique and interactive learning space for visitors of all ages to participate in hands-on geography, science, technology, engineering and math (G-STEM) learning and team-building activities.

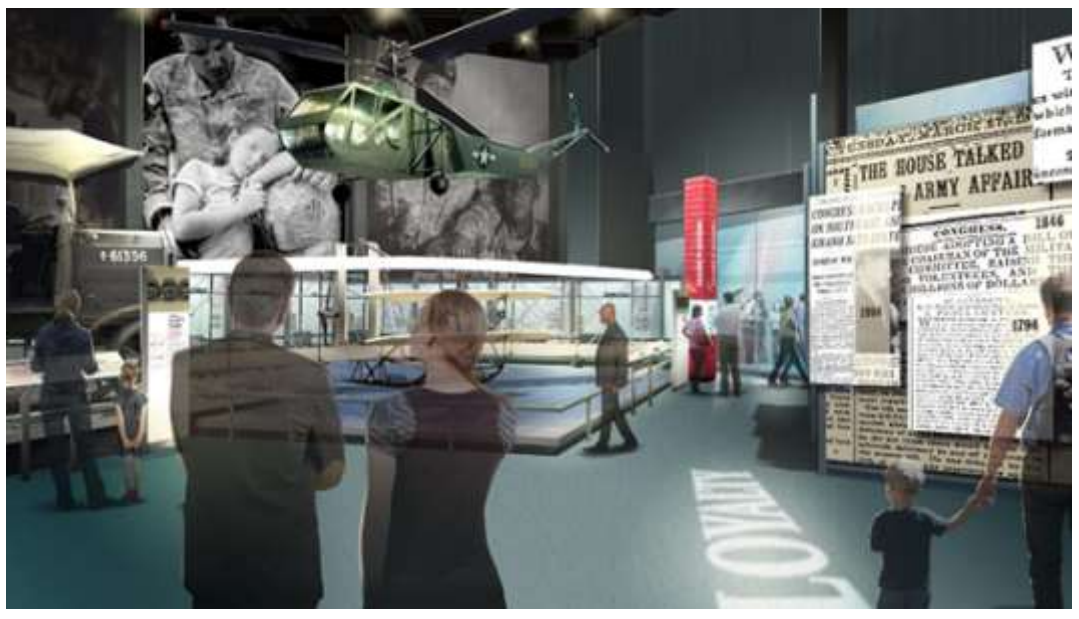
"This state-of-the art museum will engage visitors in the Army's story – highlighting how the Army was at the birth of our nation over 240 years ago, and how it continues to influence our everyday lives," said Ms. Tammy E. Call, the museum's director. "The National Museum of the United States Army will be stunning, and we can't wait to welcome visitors from around the world to see it."

The museum is a joint effort between the U.S. Army and the Army Historical Foundation, a non-profit organization. The Army Historical Foundation is constructing the building through private funds. The U.S. Army is providing the infrastructure, roads, utilities and exhibit work to transform the building into a museum.

The Army will own and operate the museum 364 days a year (closed December 25). Museum officials expect 750,000 visitors in the first year of operation.

For more information, see http://www.theNMUSA.org.

To view a video of the National Museum of the United States Army, see https://youtu.be/rG-jrw7kDLs.



Consisting of five distinctly themed areas, the 9,900-square-foot Army & Society Gallery will set the National Museum of the U.S. Army apart from all other military museums, as it will uniquely explore the broad and often unknown symbiotic relationship between the Army, its civilian government, and the people. Artist rendering courtesy of the Army Historical Foundation

The National Museum of the United States Army is currently under construction in Fort Belvoir, Virginia, and scheduled to open in June 2020. This photo was taken August 19, 2019. Photo by Duane Lempke, Army Historical Foundation

The Army keeps rolling along

Big smiles and a warm welcome greeted 42 vintage military vehicles that visited Dugway Proving Ground briefly on Sept. 6 during the 100th anniversary of the 1919 U.S. military motor convoy that first traveled across the country some 3,000 miles from Washington, D.C. to San Francisco.