December 2020

ARMY COMMUNICATOR



SIGAT Opportunities

Plus:

- ***Network integration***
- ***Information Warfare***
- ***Signal History***

FROM THE CIVIL WAR TO WINNING IN THE ERA OF GREAT POWER COMPETITION
U.S. ARMY SIGNAL CORPS
1860 - 2020
160 YEARS OF EXCELLENCE

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On the Cover

Connecting continents: Italy-based 1st Security Force Assistance Brigade (SFAB) Signal Advisors from SIGAT 1530 set up satellite based communications nodes to enable seamless connectivity to the 1st SFAB HQ at Fort Benning, GA.
US Army photo



Signal Regimental Team



COL John T. Batson
Signal School
Commandant



CSM Darien D. Lawshea
Regimental CSM



CW5 Garth R. Hahn
Regimental CWO

The holiday season has officially begun! The time is now to appreciate the changing season, take advantage of some much deserved time off, finally complete that project you've been meaning to get to, and most importantly, take the time to celebrate with family and friends (even if virtually).

The December Holidays have the opportunity to bring us together. I challenge us all to make an effort to share on social media all that we're grateful for. This holiday season, let's look back on 2020 through an optimistic lens that allows us to reflect on all that has brought us joy throughout the year; remember, "The difference between a mountain and a molehill is your perspective." (Al Neuharth)

As we close the chapter on 2020 and prepare for the new-year, please remember to make safety a priority. Winter weather, busy highways, and the continuing threat of COVID are all hazards that can be navigated safely with the proper preparedness and forethought.

For all who plan to travel, stay home with family, or spend the holidays alone, please know that each and every one of you are absolutely a valued member of the greatest team our nation has ever assembled. And just like with any great team, success is achieved when all teammates are present and contributing, so please know that you are needed and appreciated; and if anyone at any time needs help or needs someone to talk to, we have plenty of resources and people who find great joy in helping others, so don't hesitate to reach out. All contact information and available resources can be located at the military one source website at https://www.militaryonesource.mil/.

I am incredibly proud of everything we've accomplished this year as a Regiment and in the Schoolhouse. More than that, I'm excited for what's ahead. Next year is full of promise, and I know each and every one of you will rise to the occasion. Enjoy the holidays, and until 2021, Pro Patria Vigilans!

G6 states greater integration across unified network will strengthen force

Joseph Lacdan
Army News Service

Having a single unified network across the joint force will be one of the pillars that Lt. Gen. John Morrison plans to establish as the Army's top uniformed information technology officer.

The Army split its Chief Information Officer/G-6 position into separate entities on Aug. 11. The G-6, with its focus on integration, aims to bolster the service's networks and overcome cyber and IT challenges, Morrison said during a media briefing Tuesday.

As the new deputy chief of staff, G-6, Morrison acts as the primary military advisor to the Army chief of staff and to the CIO for planning, strategy, network architecture, and implementation of command, control, communications, and cyber operations and networks.

The CIO position, to be held by a secretariat member, will establish and oversee policies, while Morrison will be responsible for the implementation and strategic planning of those policies.

Greg Garcia, the former deputy of the CIO/G-6 office, is currently the acting CIO.

Morrison discussed his vision for his new role by outlining four pillars. The first will be setting up a unified network using the tactical network and enterprise networks. Morrison said he will discuss those plans with Network Cross-Functional Team leaders next month.

The unified network will also serve as the G-6 contribution to the Joint All-Domain Command and Control concept,



Lt. Gen. John Morrison
US Army photo

or JADC2. Army senior leaders stressed the importance of interoperability with the other services during a recent multi-domain integration exercise called Project Convergence.

In the second pillar, the Army looks to posture its signal and cyber forces for multi-domain operations. To achieve this, both forces must operate in a “combined arms fashion” in coordination with Army intelligence, he said. The Army must then build additional operating capacity for the unified network to operate effectively at each level.

“We need to bring those two together so that we support where the Army's going from both a modernization and from an operational warfighting construct,” said Morrison, who previously served as Army Cyber Command’s chief of staff.

Morrison said the Army has learned that expeditionary signal battalions can provide 60% more command post support than it previously did. He added that those battalions can decrease their staffing by 100 personnel and



Now-Lt. Gen. John Morrison, center, said he plans to posture the Army's signal and cyber forces for multi-domain operations as the deputy chief of staff of G-6 during a media briefing on Oct. 27, 2020. The Army recently split the former dual Chief Information Officer/G-6 position into two separate offices: the deputy chief of staff, G-6 and the CIO.
US Army photo



US Army graphic

still maintain their effectiveness, allowing the Army to reassign them to other positions.

Morrison said he will also take a closer examination of training and talent management. In June, the last officer to serve in the dual CIO/G-6 role, now-retired Lt. Gen. Bruce Crawford, discussed the Quantum Leap program, which will reclassify about 1,000 positions by fiscal year 2023.

Thirdly, Morrison plans to overhaul and operationalize the Army's cybersecurity processes, particularly in its risk management framework and move from a model that is more "focused on the bureaucracy in periodic reviews to make sure that a system, an application, or a component can operate on the network."

The general added that additional cybersecurity measures must be built into the network to enable periodic assessment of vulnerabilities and risks to deter potential threats from adversaries. He said he plans to refocus more resources toward cybersecurity and strengthen network defense against cyber threats.

"This is one of those effective drills that I think will allow us to apply our resources in a more efficient manner, but brings a level of security to the network that, quite frankly, I don't think we have right now," he said.

Finally, he said that the Army must assure that it leverages investments in the Army's network and cyber forces. "As we all know, we are probably entering into a time where budgets may not be all that they had been in the past," Morrison said. "We owe it to taxpayers to force ourselves to be efficient."

In order to achieve successful implementation of policies, the G-6, CIO and Army Cyber Command should be aligned and on the same page, he said. If not, it could lead to under-resourced policies that may not be executable. He said the Army has taken a different approach by placing cyber ops responsibilities under the G-6 office.

"The mere fact that cyber ops is included in the G-6 [responsibilities] … is not traditional," Morrison said. "If you really believe in combined arms maneuver in cyberspace, why would we separate that role in function? And so there's work for us to do there. That's probably one of the lessons learned from the other services, because that's generally how they've organized."

Establishing standards early will be critical as the Army utilizes more machine learning and artificial intelligence, Morrison said.

Both the G-6 and CIO offices remain in initial operating capability status for now and continue to build their respective staffs. Morrison said they're currently recruiting candidates with coveted cyber and leadership skills.

"I think the biggest challenge is hiring in the current operating environment," Morrison said. "The skillsets that we [want] are in very high demand. I think this is one of those rare opportunities where … we've gotten great support from Army leadership; support for these organizations to really posture themselves and the Army for the future."



1st Security Force Assistance Brigade (SFAB) Signal Advisors from SIGAT 1530 set up satellite based communications nodes to enable seamless connectivity to the 1st SFAB HQ at Fort Benning, GA.
US Army photo

Signal Advising Team opportunities in an SFAB

Maj. Brian Zeno
U Co 5/1SFAB

There has never been a more unique opportunity to serve our Signal Regiment than to become a member of a Security Force Assistance Brigade (SFAB). Since 2017 the Army has invested numerous resources to include equipping, training, and manning some of the finest Soldiers that our Army has to offer. This is truly indicative of our Signal Professionals serving within an SFAB.

The Military Occupational Series (MOS) 25 series assignments for an SFAB include 25A, 25B, 25D, 25E, 25S, and 25U. The breadth of assignments covers positions as the Signal Advisor (25U) on a Maneuver Advisor Team (MAT), Battalion S6, Brigade S6, and Brigade Signal Company. Of these jobs, The Signal Company has the most challenging opportunities and highest level of impact of any company in the SFAB.

The Signal Company is one of the smallest companies in an SFAB with an MTOE authorization of just 11 Signal Advisors. Don't let the small size of this organization fool you. The responsibility of the Signal Company ranges from supporting communications for the Brigade TOC and TAC; providing subject matter level expertise training on all Advisor communications systems for the Maneuver, Fires, Logistics, Engineer, and Military Intelligence Advisor teams; and assessing, supporting, liaising, and advising Foreign Security Forces (FSF). This broad array of Mission Com-

mand enhancing functionality impacts the full spectrum of Security Force Assistance (SFA) activities.

The traditional employment template for an SFAB was originally centered on rotations to the CENTCOM AOR, in particular Afghanistan. 1st SFAB was the first to head out in 2018 with the inaugural SFAB employment to Afghanistan, establishing partnerships across the entire CJOA-A. The signal advising portion of this mission set contributed greatly to the success of the overall Advise and Assist mission.

After Afghanistan, 1st SFAB was given the task to align and provide advising in support of US Army Africa. 1ST SFAB developed a three separate Force Package construct in order to ensure that one Force Package would be forward employed, another on their training glide path, and the other on a reset and force modernization window.



A Signal Advisor from SIGAT 1531 demonstrates a low profile non-standard use for JBC-P from an NTV.
US Army photo

The Signal Company created three distinct Signal Advisor Teams (SIGAT) from within the company to support this new way of operating and deployed the first SIGAT in 2019 to support the Mission Command Node for the Brigade TAC at Caserma Del Din in Vincenza, Italy. The SIGAT successfully validated and executed full reach back to their systems at Fort Benning, GA from Italy via the T2C2 and Scalable Class of Unified Terminals (SCOUT) nodes; a first of its kind for USARAF as well as 1st SFAB. The SIGAT also ensured that the numerous Advisor Teams employed across the continent of Africa were fully operational across the PACE in the most remote and austere environments utilizing the Integrated Tactical Network (ITN) architecture.



A Maneuver Advisor Team (MAT) Advisor receives a practical exercise on the ATAK system during the Advisor Commo Course.
US Army photo

With two successful SIGAT employments to Italy, the 1st SFAB Signal Company prepared to embark on an entirely new mission set and area of operation in 2020 as the 1st SFAB was permanently aligned to provide



Advisors from Battalion Advisor Team (BAT) 150 demonstrate TACSAT proficiency with assistance from SIGAT 1531.
US Army photo

support to SOUTHCOM.

SIGAT 1532 is now fully trained and validated for employment to Honduras to provide Mission Command Support to TF LYCAN in addition to developing signal advising partnerships across the Joint spectrum of Operations Centers and Task Forces for the Honduran Military. This exciting opportunity will establish the first ever signal advising relationships for our Central and South American Partnered Forces.

One of the more awarding opportunities for the Signal Company is the impact within the Brigade to "Advise the Advisor" and to provide world class training to the Advisor Teams. 1st SFAB utilizes the Advisor Communications Course which is a two week block of instruction with hands on training and certification that focuses on training Advisors on their communications systems regardless of MOS or role on a team.

An advisor team is equipped with a full array of communications systems which include the SCOUT node, PRC-148C with EUD (ATAK), DTCS radio, SHOUT Nano, PRC-150/160, PRC-152/163, PRC- 117G, Iridium SAT Phone, and a variety of other tailorable non-standard communications platforms to enable a bevy of team based PACE plans regardless of the environment.

Each SIGAT in tandem with the Brigade S6 ensures that all Advisor Teams are able to operate their kit without the over reliance on an FSR or a persistent need for additional MOS 25 series augmentation. These training engagements across the brigade demonstrate that the Signal Company SIGATs live up to the "elite communicator" standards that are expected for every Advisor in the Signal Company.

Any Signaleer interested in taking their career to the next level and being part of something extraordinary should consider volunteering for an SFAB today!



Advisors from the 1st SFAB Signal Company provide SCOUT instruction during the Advisor Commo Course.
US Army photo

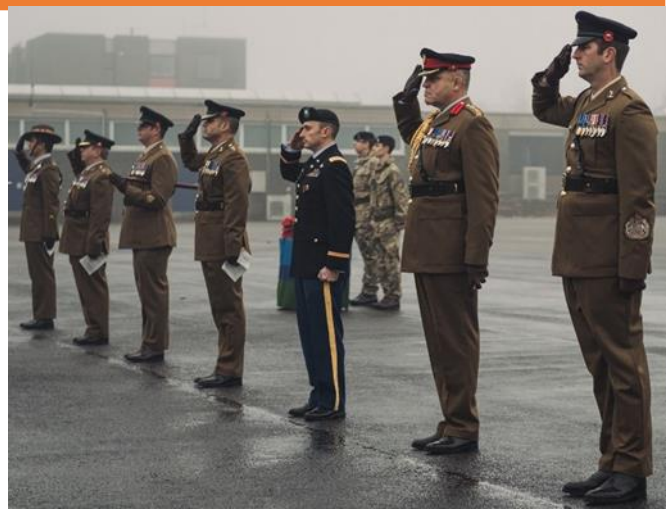
The Royal Corps of Signal honor the fallen for Remembrance Day

Special to the *Army Communicator*

At the 11th hour on the 11th day of the 11th month of 1918, the armistice ending the Great War, was signed and peace fell over the battlefields of Europe. One hundred years later, the British Army pauses to reflect on this solemn occasion. Remembrance Day in England, also known as Armistice Day or Memorial Day in the United States, is a time to remember the fallen. The British Army Royal Corps of Signals hosted a Remembrance Day ceremony on Blandford Camp.

The Royal Corps of Signals currently occupies Blandford Camp in Dorset, England which is their home garrison and headquarters of the regiment. Blandford Camp has a long history of partnership and cooperation between the United States and the United Kingdom. Blandford was first initially used by the Royal Navy as a place to train prior to operations on the Gallipoli coast in WWI. During WWII and in preparation of the D-Day landings, Blandford Camp was turned over to the American Army and served as a field hospital from 1944 to 1946, processing the combat causalities from the invasion on Fortress Europe.

Blandford Camp is also the site of the Roosevelt memorial garden, the first memorial constructed outside the United States in tribute of the fallen president. Every year for the Remembrance Day ceremonies, the US Signal Corps exchange officer delivers an address in the Roosevelt Garden. This year was quite different and due to COVID restrictions the ceremony was in jeopardy of being cancelled for the first time in a century. Maj. Mark Natale, the current Signal exchange officer assigned to the UK, opened his remarks by illustrating the parallels in history.



Maj. Mark Natale (center) and his UK counterparts participate in the British Remembrance Day ceremony.
Courtesy photo

"I'm reminded that we face many of the same challenges today that our forbearers did in 1920," Natale said. It was shortly after the end of the Great War that we faced a global Pandemic. As our predecessors did 100 years ago, we will carry on and remember the fallen."

Maj. Natale then laid a wreath at the Roosevelt garden memorial for the fallen and reaffirmed the partnership between the US and the UK.

"I would like to take a moment and reflect upon our special relationship in combat," he said. "Since World War I, we have stood together on the battlefield in nearly every conflict. Brothers in Arms. We have spilled our blood together on foreign soil, in the pursuit of peace. To-



Maj. Mark Natale lays a wreath at the Roosevelt memorial garden after his remarks on Remembrance Day. Courtesy photo

day, we recognize just a few of the many names that have fallen in that noble pursuit."

Maj. Natale then read the names of one British and one American service member who has fallen in every conflict from WWI to Syria. Garrison Sgt. Maj. Bill Reddy applauded the work of the British Soldiers, the US representation, and the HMS Collingwood association for their hard work and determination in paying tribute to the fallen during these difficult times.

"Thank you to everyone that made this tribute a success and for remembering the fallen on this special day, regardless of the pandemic," he said.

The US Army Signal Corps was also represented by Natale at separate remembrance events across the camp. The memorial for the men of the Collignwood Battalion, Royal Naval Division who trained at Blandford Camp, sits on the end of the camp. The obelisk immortalizes the brave men that went over the top of the trenches and were met with devastating fighting on the Gallipoli coast. Of the 700 men of the Collingwood battalion, only two officers and 200 men survived the onslaught, gaining a mere 400 yards of land before being relieved and evacuated.

Maj. Natale also participated in a ceremony in Hawke's square with his Royal Signals counterparts and Soldiers. The junior Soldiers are currently in their Signal training, ready to enter the combat force within weeks. The garrison Chaplain, Padre J. Jamieson, gave an emotional tribute and charged the young Signal Soldiers with taking up the banner of being a British Army Soldier.

"This is now your time, your time to carry on this honour and face the perils of combat, like those that have come before you," he said.

The Chaplain also called the fallen warriors "Peacemakers," saying, "People think the term Peacemaker is soft and diplomatic, it isn't. The US Army Colt single action revolver was called the peacemaker. It was a weapon of war, unwieldly, and strong. It won the west because people knew what it could do. That is what you are, warriors. Peacemakers."

Building relationships with our British partners and honoring the dead from each nation reinforce the importance of this partnership and our commitment on and off the battlefield. Lest We Forget.



Blandford Camp commander, Col. Mike Morton, lays a wreath at the Collingwood Battalion Memorial. The battalion trained at Blandford prior to their deployment to Gallipoli where nearly all the men were lost. Courtesy photo

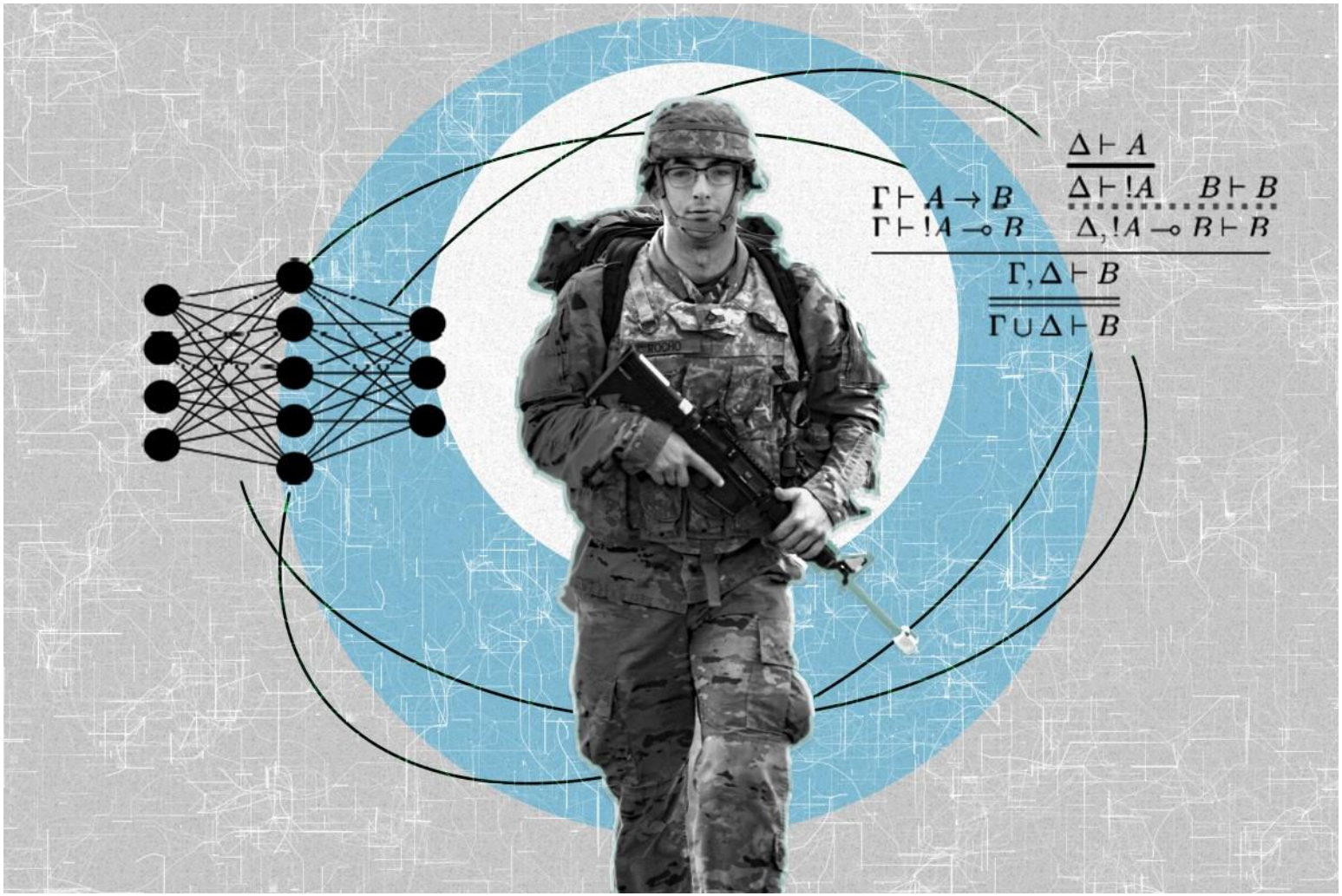
AI research helps Soldiers navigate complex situations

US Army DEVCOM Army Research Laboratory Public Affairs

Researchers at the US Army's corporate research laboratory developed an artificial intelligence architecture that can learn and understand complex events, enhancing the trust and coordination between human and machine needed to successfully complete battlefield missions.

The overall effort, worked in collaboration with the University of California, Los Angeles and Cardiff University, and funded by the laboratory's Distributed Analytics and Information Science International Technology Alliances, addresses the challenge of sharing relevant knowledge between coalition partners about complex events using neuro-symbolic artificial intelligence.

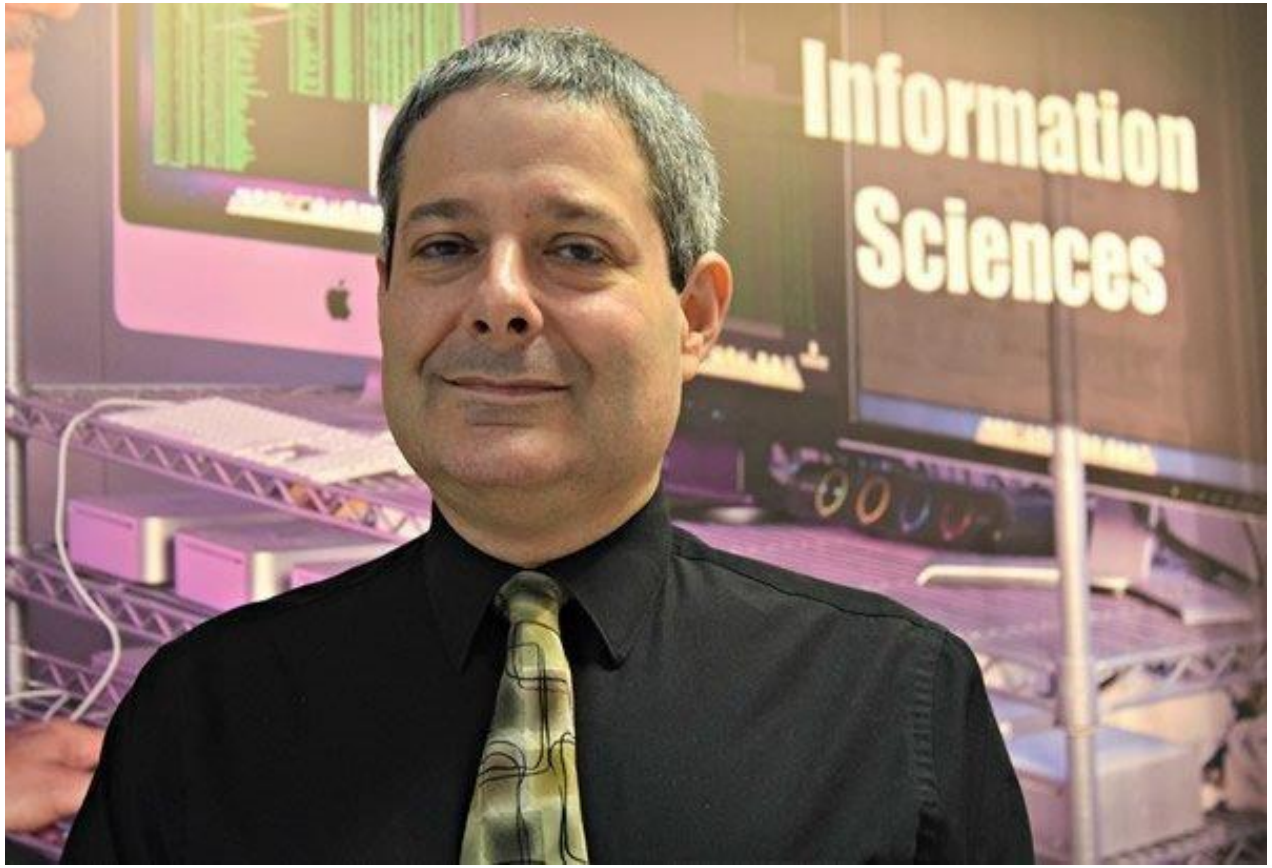
Complex events are compositions of primitive activities connected by known spatial and temporal relationships, said U.S. Army Combat Capabilities Development



Army researchers developed an artificial intelligence architecture that can learn and understand complex events, enhancing the trust and coordination between human and machine.
Photo illustration by Rudi Petry

Command, now referred to as DEVCOM, Army Research Laboratory researcher Dr. Lance Kaplan. For such events, he said, the training data available for machine learning is typically sparse.

To further understand complex events, imagine people in a crowd taking pictures of an iconic government building. The act of picture taking involves primitive events/actions. Now, imagine that some of the people are coordinating their picture taking for the purpose of a reconnaissance mission. A certain sequence of primitive events such as picture taking occurs. Clearly, it would be good for a force protection system to detect and identify these complex events without generating too many false alarms due to random primitive events acting as clutter, Kaplan said.



Dr. Lance Kaplan
US Army photo

This new neuro-symbolic architecture enables injection of human knowledge through symbolic rules (i.e. tellability), while leveraging the power of deep learning to discriminate between the different primitive activities.

This is accomplished following a neuro-symbolic architecture where the lower layer is composed of neural networks that are connected through a logical layer to form the complex event classification decision, Kaplan said. The symbolic layer incorporates known rules that enable learning the lower layers without having to train labeled data for the primitive activities.

Two different approaches have been developed to enable learning at the neural layers by propagating gradients through the logic layer.

The first, Neuroplex, uses a neural surrogate for the symbolic layer. Second, DeepProbCEP, uses DeepProbLog to propagate the gradients.

Neuroplex was evaluated against pure deep learning methods over three types of complex events formed by a sequence of images, a sequence of sound clips and a nursing activity data set collected from motion capture, meditag and accelerometer sensors.

The experiments and evaluation showed that Neuroplex is capable of learning to efficiently and effectively

detect complex events, which cannot be handled by state-of-the-art neural network models.

During the training, Neuroplex not only reduced data annotation requirements by one hundred times, but also significantly sped up the learning process for complex event detection by four times.

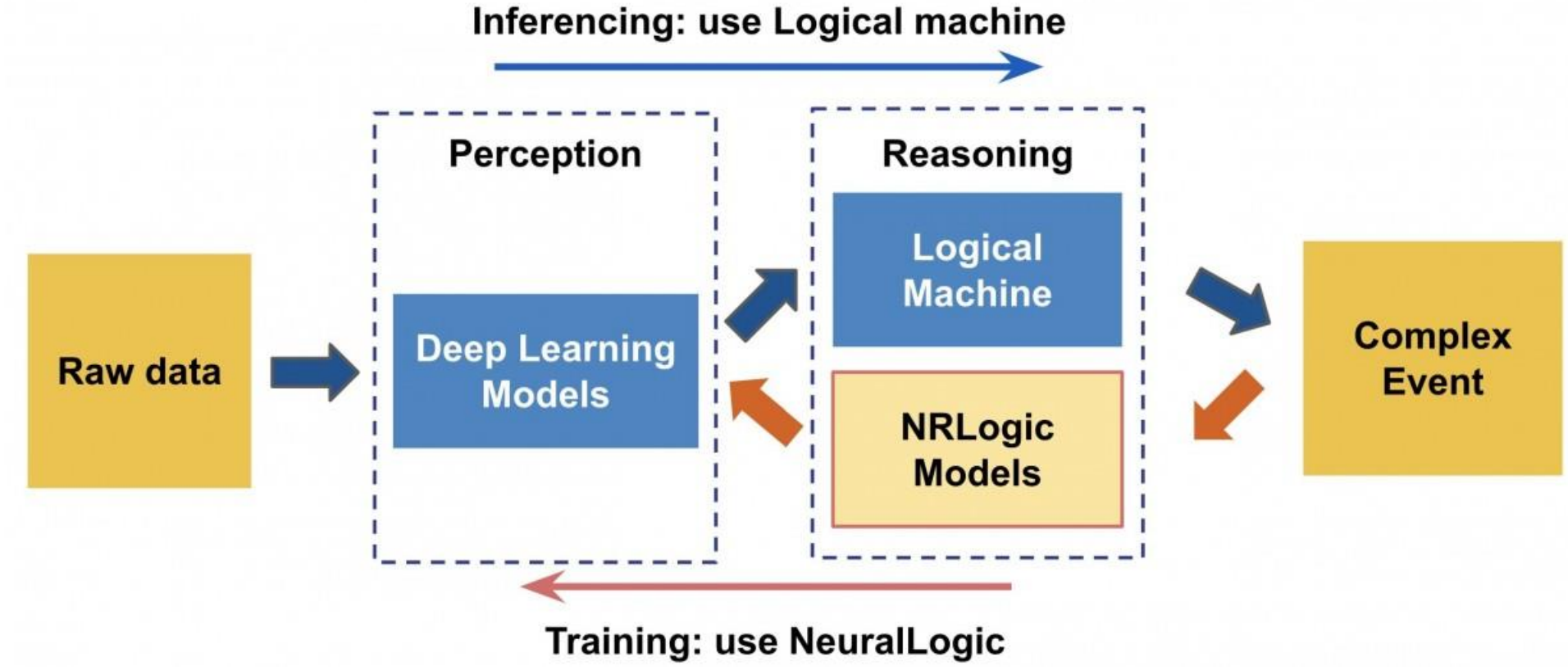
Similarly, experiments on urban sound clips demonstrated over a two times improvement in complex event accuracy for DeepProbCEP against a two-stage neural network architecture.

"This research demonstrates the potential for neuro-symbolic artificial intelligence architecture to learn how to distinguish complex events with limited training samples," Kaplan said. "Furthermore, it is demonstrated that the systems can learn primitive activities without the need for annotations of the simple activities."

In practice, he said, the initial layers of the neuro-symbolic are pre-trained, but the amount of data to collect and label can be greatly reduced, lowering costs.

In addition, the neuro-symbolic architecture can leverage the symbolic rules to update the neural layers using a small set of labeled complex activities in situations where the raw data distribution has changed. For example, in the field it is raining, but the neural network models were trained over data collected in sunny weather.

The neuro-symbolic learning is al-



Researcher use the neuroplex system with a perception module and dual form reasoning module.
US Army graphic

so able to incorporate the superior pattern recognition capabilities of deep learning with high level symbolic reasoning.

"This means the AI system can naturally provide explanations of its recommendations in a human understandable form," Kaplan said. "Ultimately, this will enable better trust and coordination with the AI agent and human decision makers."

The symbolic layer also enables tellability. In other words, he said, the decision maker can define and update the rules that connect primitive activities to complex events, both at the initialization stage, where a perception module is untrained, as well as during the fine-tuning stage, where a perception module is a pretrained off-the-shelf model and needs to be fine-tuned to a specific environment.

"This research is able to leverage the advancements in deep learning and symbolic reasoning," Kaplan said. "The dimensionality of the sensor data whether it is time-series data (e.g., accelerometers) or video is infeasible for pure symbolic reasoning. Similarly, deep learning is unable to learn patterns that manifest over large time and spatial scales inherent in complex events. The hybrid of neuro-symbolic learning is necessary for complex event processing."

The research directly supports the Army Priority Research Area of artificial intelligence by increasing speed and agility in which we respond to emerging threats, Kaplan said.

Specifically, the research is focused on AI for detecting and classifying complex events using limited training data to adapt to changing environments and learn emerging events.

The work also supports network command, control, communications and intelligence by engendering trust between AI and human agents representing different coalition partners by the AI incorporating symbolic explanations and the human agents using symbolic rules to guide the reasoning of the AI, he said.

"Complex event processing is difficult, and the research is still in its infancy," Kaplan said. "Nevertheless, we have made great advancements over the last two years to develop the neuro-symbolic framework. The research still needs to consider more relevant data sets, and there are still other questions to answer regarding the human-machine interface. In the long term, I am confident that a neuro-symbolic AI will be available to Soldiers to provide superior situational awareness than the available to the adversary."







Observations on Brig. Gen. William B. Hazen, Chief Signal Officer 1880-1887

Steven J. Rauch
Signal Historian

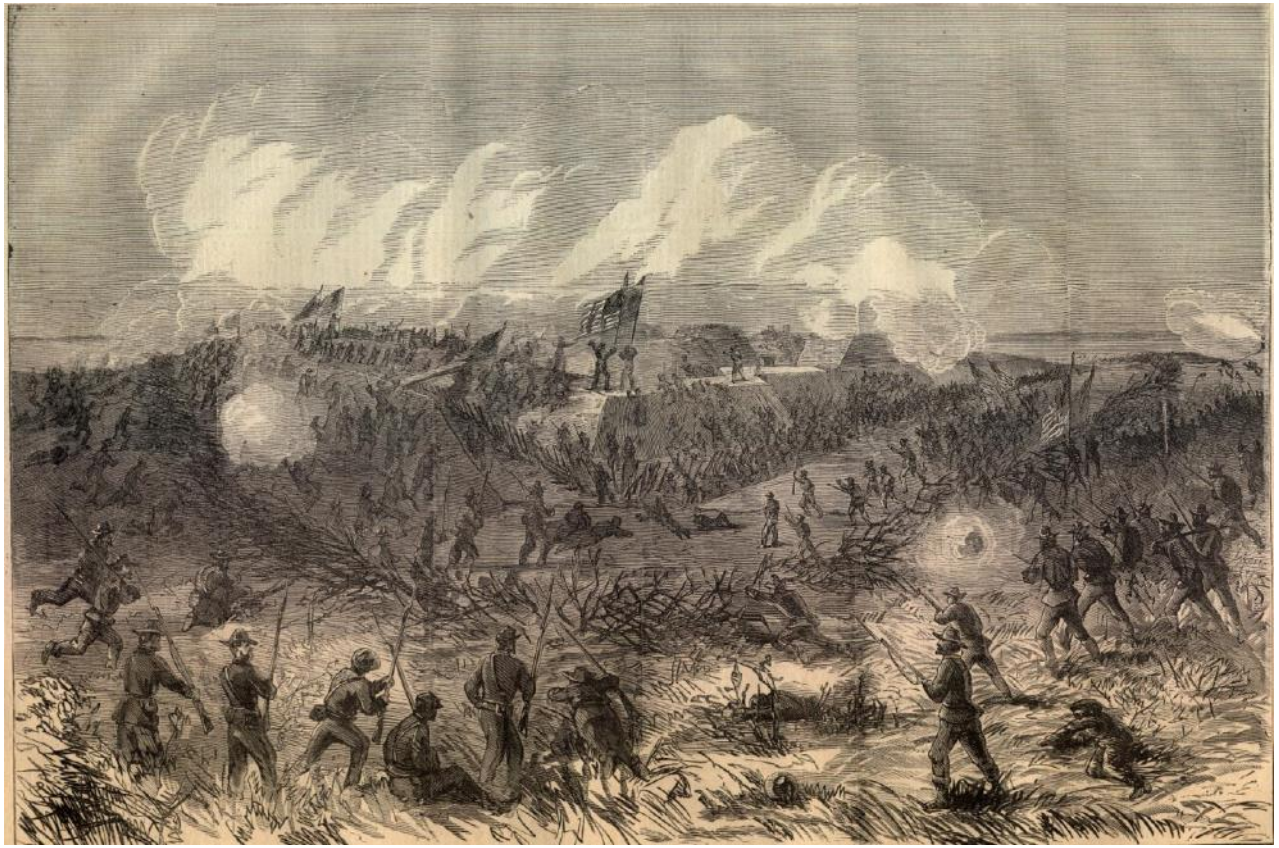
On December 15, 1880, William B. Hazen was appointed to the position of Chief Signal Officer with the regular army rank of Brigadier General. Hazen had served in the US Army since his graduation from West Point in 1855. During his 25 years of service, he accumulated a record of accomplishments to include leading a corps by the end of the Civil War. However, besides accomplishments, Hazen accumulated criticism, not just because of his stern view of discipline but because his strong sense of duty often conflicted with those who he believed had low standards, sought to avoid duty, or exhibited incompetence, regardless if it was a soldier or the Secretary of War.

Hazen's life and career are most associated with the drama of the American Civil War but it was in the pre-war army where he established his abilities as a leader. He graduated from West Point at age 25 as an infantry officer and served in the 8th Infantry regiment posted to Oregon and later Texas. On October 30, 1859 Hazen led a force of nine soldiers along with a posse of 30 civilians from Fort Inge, Texas to chase after a Comanche war party that had killed two settlers. For several days they tracked the eight man war party. On November 3, they discovered them and during the short but fierce combat four Indians were killed and three others wounded. Hazen was struck by a bullet that went through his hand and then into his body. Critically injured by his wounds, Hazen sent five soldiers to seek



Brig. Gen. William B. Hazen, Chief Signal Officer 1880-1887
Signal History Office historical collection

medical aid from the nearest post 85 miles away. He and the other wounded men lay for three days waiting for help and soon ran low on food and water. On November 6, Hazen decided to move back to Fort Inge even though he had lost a significant amount of blood. His party reached an old mission two days later along the Nueces River. From there a message was sent to Fort Inge requesting medical supplies and transportation for the wounded. Finally, on November 10, a week after the battle, Hazen and the men were rescued. Hazen's wound was very infected and a doctor determined the bullet had broken several bones in his hand, then entered his right chest between the sixth and seventh ribs. The bullet was too deep to be removed so it remained inside of him for the rest of his life. On December 5 Hazen was transferred to the Army hospital at San Antonio and was assigned a surgeon to remain with him until he could be left alone. Hazen was cited for his actions by both Lieut. Col. Joseph E. Johnston and Colonel Robert E. Lee for, "gallant acts and patient endurance under great and varied hardships." He was then placed on convalescent leave for almost a year until he could resume duties, this time as an instructor of tactics at the US Military Academy.



Hazen's Division storming Ft. McAllister, GA 13 Dec 1864, Signal History Office historical collection.

As an instructor he was a strict disciplinarian, described as independent minded, dogmatic, and outspoken, with a driving ambition and tendency toward perfectionism. The *New York Times* later described his temperament as, "aggressive and disputatious." When the Civil War began he was appointed a Colonel of Volunteers from his home state of Ohio, thanks to the help of his boyhood friend James A. Garfield who had become a prominent politician. Upon taking command of the 41st Ohio Volunteer Infantry regiment, Hazen issued an order that said in part, "[H]e trusts that every individual of the command fully appreciates the importance of the first principle of the soldier, --- obedience to commands. Without it there can be no efficiency; and he feels confident that every officer and soldier has determined to

carry out this principle cheerfully." Using that philosophy Hazen formed the raw volunteers into an excellent unit and though he was initially unpopular, he won the respect of the men once they had been through hard battle.

During the war he gradually assumed command of larger units and became a reliable and steady commander who could be found where the fighting was most intense. By November 1864, Hazen commanded the 2nd Division, XV Corps, of the Army of the Tennessee. At the conclusion of the infamous "march to the sea" he was personally chosen by William T. Sherman to lead his division in the attack at Ft. McAllister on December 13, 1864. This successful assault opened the lines of communication with the US Navy and enabled the army to be resupplied. Hazen was rewarded with a brevet rank of Major-General of Volunteers on April 20, 1865 for this action along with recognition of his, "long and continued service of the highest character." He then commanded the XV Corps from May 23 until August 1, 1865, his final wartime command.

When the Army downsized after the Civil War, Hazen along with other officers who attained high volunteer ranks during the war reverted to their regular army rank, usually at a much lower grade. Hazen was appointed Colonel of the 38th Infantry and for the next 14 years he served in the Western territories and states. In 1870 Hazen was ordered to Europe to observe and report on the Franco-Prussian War, which he wrote about in a book, *The School and the Army in Germany and France* published in 1872. This book was highly critical of the US Army systems of schools, training, and administration compared to what he observed of the Prussian Army and did not help his chances for choice commands or promotion.

However, his relationship with James Garfield, who now was the chairman of the House Committee on Military Affairs, gave Hazen an opportunity to expose the illegal practices of post traders and suppliers that included bribes, selling of licenses and kickbacks that eventually implicated the Secretary of War William W. Belknap. This led to Belknap's resignation and an impeachment trial at which Hazen testified to the illegal activity. After this Hazen was sent to Vienna from 1876-1877 as a military attaché to observe the Russo-Turkish War. Upon his return he found himself embroiled in another controversy, this time defending himself from charges of unprofessional conduct during the Civil War brought by Colonel David S. Stanley that had been festering for years. After court-martial proceedings Stanley was admonished and charges against Hazen were dropped but it



Hazen Hall, US Army Signal School, Fort Gordon, Ga.
Photo by Steven J. Rauch

exposed bitter feelings among many



Hazen Hall, US Army Signal School, Fort Gordon, Ga.
Photo by Steven J. Rauch

of Hazen's old colleagues, to include William T. Sherman.

Luckily for Hazen, James Garfield was nominated for President in June 1880. On August 24, 1880 Brig. Gen. Albert James Myer, the Chief Signal Officer, died suddenly. Hazen, like many others in the Army, sought to fill the open position, which at that time did not require a pre-requisite of either rank or technical skill. Hazen believed that, "no army of the future will be without a fully organized Signal Corps." He appealed to Garfield that he wanted the position because, "it gives me new work, which to me is new life. The want of work is strangulation and death." Garfield, who won the election, urged President Rutherford B. Hayes, also from Ohio, to appoint Hazen to the chief signal officer position. Hayes did so and on December 17, 1880 William B. Hazen became the 5th Chief Signal Officer of the US Army.

During his tenure as Chief Signal Officer, Hazen struggled to maintain and defend the Signal Corps against constant threats of reduction and having the meteorological duties transferred to another agency. The most controversial event during his tenure was Lt. Adolphus W. Greely's expedition to the Arctic to gather weather data in 1881. Unexpected heavy snows and storms prevented the arrival of supply ships in 1882 and 1883. By 1884, the men were starting to die but the Secretary of War, Robert Todd Lincoln, opposed sending a relief expedition because he didn't think anyone was still alive and it would be a waste of resources. Hazen, along with Greely's wife, tried to get someone in the government to help. Finally on June 22, 1884, a Navy ship rescued six men, including Greely, who were still alive. Hazen sharply criticized Lincoln who he blamed for the death of the men. Lincoln censured Hazen for his statements, but Hazen went to the press to popularize the incident. As a result, Hazen was court-martialed and reprimanded for insubordinate conduct, though many agreed with his charges against Lincoln.

In January 1887 Hazen, who still suffered effects from his wound, became ill at his home in Washington DC. Several doctors were called to help but were unable to do anything for him. At the time his wife Mildred and 10 year old son John were in Europe and so were not with him when he died of kidney failure on January 16, 1887 at the age of 56.

Hazen has been remembered by the Signal Corps with a classroom building named for him on June 22, 1966 at Fort Gordon. During his time in the Army, Hazen always stood for his convictions and was not shy about exposing others who did not meet or share his high professional standards - subordinate or superior alike. His views on Army reform planted the seeds for the acceleration of professional reform at the turn of the century. After 140 years since his appointment as Chief Signal Officer, Hazen's professionalism, dedication, and legacy still occupy an enduring and honorable place in Signal Corps history.

In the next

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