# 780th MILITARY INTELLIGENCE BRIGADE (CYBER)

Vol. 8, Issue 2

## DEVELOPING TOMORROW'S LEADERS, TODAY: PROFESSIONALS IN A DIGITAL ERA

Developing Next Generation Leaders, pg. 3 Developing Tomorrow's Leaders Today, pg. 25 Instructor Lead Distance Learning, pg. 33



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Farewell to Command Sgt. Maj. James Krog Steven Stover	1
<b>Developing Next Generation Leaders</b> Command Sgt. Maj. Ronald V. Krause	3
<b>We Need Each Other</b> Chaplain (Capt.) Michael Cerula	5
Unit Ministry Team Wins INSCOM Top Honors Steven Stover	6
<b>UCMJ is a Vote of Confidence In Us</b> Maj. Timothy Minter	7
Cyber Snapshot: Capt. Timothy J. Hennessy	8
780th MI BDE SHARP/SARC Amber Fitzwater	9
Sexual Assault Prevention Month	10
Sexual Assault Prevention Committment Pledge	11
Analog Leadership In a Digital World Command Sgt. Maj. Kelly J. Barnes	12
Embracing the Future 1st Sgt. Carlos Picazo	13
Another Mission Command Discussion Capt. Nolan Miles	14
<b>Cross Word Puzzle</b> Chief Warrant Officer 5 Travis Ysen	15
Hacking Quarentine Sgt. Matthew Taylor	17
Art Instillation Coming This Summer Master Sgt. Cory MacNeil	19
Leadership Through the Looking Glass Craig Morris	23
<b>Developoing Tomorrow's Leaders, Today</b> Master Sgt. Quincey Welch III, 1st Sgt. Rico Rico, 1st Sgt. David Boyer	25
Developing NCOs In the Operational Domain Command Sgt. Maj. Christian A. Adkison	27

Soldiers In Army Small Arms Championship Steven Stover

All Army CyberStakes Maj. Lisa Beum

Instructor Lead Distance Learning to Train the Force Command Sgt. Maj. Timothy M. Hawley

**Communicating Why to Z** 1st Sgt. Stan Collins

Become a Certified Tool Developer

**Technically and Tactically Proficient** 1st Sgt. Robert Eberhardt, 1st Sgt. Jack Hansen

**Brigade Cork Board** 

**Design Matters** Master Sgt. Cory MacNeil

On the Cover With Sgt. 1st Class Rafael Ortiz (left) as non-commissioned officer in charge, Soldiers of the 781st Military Intelligence Batallion (Cyber) raise the Fort Meade, Maryland, Garrison flag on Constitution Day, September 17, 2017. Photo illustration by Master Sgt. Cory MacNeil.

40

43

29

31

33

35

37

39

N MY OFFICE CALL WITH Command Sgt.Maj. Ronald Krause after his change of responsibility for the 780th Military Intelligence Brigaade (Cyber), he spoke about the technology and distance challenges 780th Leaders must overcome to connect Joint Qualification Requirements to timely incentive pay and mission execution. The brigade command group decided this issue of The BYTE, and its theme, Developing Tomorrow's Leaders, Today: Professionals in a Digital Era, would be NCO driven. I hope that as you read these thoughtful articles, you will gain, and discover your own, insights to develop leaders, and future leaders, of the 780th MI BDE (Cyber).





## Praetorians Bid Farewell to Command Sgt. Major James Krog

Steven Stover, brigade public affairs officer, 780th Military Intelligence Brigade (Cyber)

# "Thank you for your service to our Nation and the U.S. Army."

ORT GEORGE G. MEADE, Md. – The Praetorians – the Soldiers, Army Civilians and their Family members – bid a fond farewell to Command Sgt. Maj. James Krog and his wife Linda during a change of responsibility ceremony hosted by Col. Brian Vile, commander of the 780th Military Intelligence (MI) Brigade (Cyber), at McGill Training Center, April 24.

Unfortunately, due to the COVID-19 pandemic, Soldiers from 781st MI Battalion (Cyber), headquartered at Ft. Meade; the 782nd MI Battalion (Cyber) and 915 Cyber Warfare Battalion, headquartered at Fort Gordon, Georgia, with detachments in Hawaii and Texas, could not attend the ceremony in person and, in keeping with Army traditions, showcase the passing of the brigade colors at the forefront of a brigade formation, which represents the transition of senior enlisted leaders and the historic importance of their title as 'Keeper of the Colors.'

Fortunately, the Praetorians were able to watch the ceremony via a live stream on the brigade's Facebook page. The participants included: Vile; Krog; Command Sgt. Maj. Ronald Krause, the incoming brigade senior enlisted leader; Linda Krog and Cristina Krause, their spouses; Sgt. Maj. Jonathan Coleman, Brigade S-3 (operations) noncommissioned officerin-charge; Sgt. 1st Class John Pederson, the narrator; and Chaplain (Maj.) Peter Baek. Each participant maintained social distancing, wore protective garments, and did their best to thank Command Sgt. Maj. Krog for his service as the Brigade's senior enlisted leader and 'Keeper of the Colors' since September 2017, as well as to recognize his more than 30 years of service with

the United States Army.

"As the most senior and accomplished non-commissioned officer of the Brigade, he is the direct representative of the Brigade's most important assets – our Soldiers," said Vile. "He was a tireless advocate for our Soldiers and Civilians, and with 30 years' experience, it was a task he executed flawlessly."

According to Vile, Krog took care of his Soldiers every day – making sure they were paid, treating them with respect, and ensuring their future, whether in the Army or out, was secure.

"I cannot think of a better assignment or better group of people that I would want to work with as my final assignment in the Army," said Krog. "I asked the Army for this assignment because of the quality of people in the organization and I am very happy that the Army saw fit to place me in this position."

In addition to reminiscing about his time serving as the senior enlisted leader for the only offensive cyberspace operations brigade in the U.S. Army, Krog talked about an Army career spanning back to when he enlisted in the Oklahoma Army National Guard as a Combat Engineer in July 1986, and when he entered Active Duty in October 1991 as a Voice Intercept Operator and Korean linguist, changing languages to Persian Farsi 1995.

"Looking back, the last 30 plus years in the Army have flown by," said Krog. "I am glad I joined the Army and would not change anything. It has had its ups and downs, but it has been the greatest experience one could ask for. In no other occupation would I have been able to do the things I have done. I have visited over 15 countries and met thousands of people that I can call brother or sister. It has been a great experience and I would gladly do it again."

On behalf of the Praetorians, Col. Vile welcomed the Krause Family to the 780th MI Brigade.

"To Command Sergeant Major Kraus and Cristina, welcome to the Praetorians," said Vile. "Together, we have been entrusted with the crown jewel of the United States Army and the Cyber Mission Force ... the 780th. I know that you will continue to fight and advocate for our Soldiers and Civilians."

Command Sgt. Maj. Krause is a Cyberspace Operations Specialist Senior Noncommissioned Officer, with over 24 years in the Army. Krause enlisted in the Active Army on May 25, 1995 as a Signals Intelligence (SIGINT) Analyst. Over the last 16 years, he specifically focused on intelligence support to cyberspace operations and the development of Soldiers, as well as training for the future of the Cyber Mission Force.

"I am honored by this opportunity to serve the Soldiers, Civilians, and Families of the 780th, and I appreciate the trust and confidence of our senior leadership," said Krause. "Command Sgt. Maj. Krog, thank you for the years of friendship and mentorship, I appreciate what you have done for the Praetorians and the Army. To my family and friends, thank you all for your continued support and guidance, I would not be here without you. Lastly, to the Soldiers, Civilians, and Families, I look forward to evolving our organization, culture, and mission together. Praetorian 7, signing on."

Praetorians! "Strength and Honor"





## Expectations of Developing Next Generation Leaders

Command Sqt. Maj. Ronald V. Krause, command sergeant major, 780th Military Intelligence Brigade (Cyber)

#### Knowing where to find training requirements is just as important as understanding how to build individual paths to reach them.

ARMY CULTURE

OPERATIONAL

TRAINED AND READY UNITS

LED BY COMPETENT

CONFIDENT LEADERS

WARRIOR ETHOS

AM EXCITED TO JOIN this amazing organization. For me, coming to the 780th is like returning home after a long journey. Though much is familiar, and I know my way around certain paths, the unit has grown with new people, places, and missions. Back in 2004, I started a focused career, in what is today know as Cyberspace Operations. Prior to that, I spent time learning about both Military Intelligence and Signal operations from tactical to national-level assignments. It was not until 2004, just nine years into my career, that I

Psesment .

finally found my place, my passion, which is now what we do every day!

Understand that in 2004, there were no "cyber" career fields as we know them today, and the work roles were not well defined or supported. A small detachment performed STANDARDS the mission of recruiting, development, training, and operational deployment of what was Computer Network Operations. I was fortunate to start in the tactical side of cyberspace operations, learning and developing my Cyber and Soldier skill sets. We had programs that enhanced our knowledge of operations, our technical and tactical skills, our health and fitness, and ensured we were very comfortable with our assigned weapons as well as vehicles (ADP 7-0, 2019). Little

did I realize, at the time, just how much of our work in those days embedded the core concepts of training development into me, influencing my current and future career.

Since 2004, I had the opportunity to work in and with all of our modern cyber work roles from tactical to national-levels. I was excited to help build out the work force road map that set us on a more clearly defined career path. This led to the creation of amplifying documents, evolving missions, and a school (Joint Cyber Analysis Course) that would be the foundation for a new force. The vision for the future of cyberspace operations included building recognized and codified career paths, so that others could have the careers we wish we could have started in.

From 2008 to 2012, I learned about training and education development, at both Joint and Army levels. We clarified and synthesized the work roles, developing three training tiers and the associated Knowledge, Skills, and Abilities (KSA) that are at the

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core of operational requirements for each. We used the KSAs to develop Individual Critical Task Lists (ICTL) that align to skill levels; much like an Army Critical Task Site Selection Board (CTSSB) does (TP 350-70-1). While building out this new force, I learned the importance of understanding when, where, and how such training would occur. This INPERATIVES developed my understanding of the importance each training domain (AR 350-1, 2017) plays in decisions about when certain training should take place and clarifies resources in order to meet stated KSA driven objectives.

PRINCIPLES Knowing where to find training requirements is just as important as understanding how to build individual paths to reach them (ADP 6-22, 2019). In this digital era, we have more access to tools,

knowledge, and synthetic training environments than

ever before. Key to preparing our next generation of leaders is this knowledge. Several Army publications cover the basics of being a Soldier, and I have highlighted a few of them in this article for you to reference. However, the second half of this article I will provide some guidance, based on my experience, on developing tomorrows leaders today, particularly in a digital era.

One of the first steps in developing others is to gather the elements that define an individual's career path and work role. The ICTL truly sets the foundation for developing institutional courses, and on the job/operational training via Soldier Training Publications (STP), and Training Circular (TC). Your proponent, through one digital medium or another, can provide this information. For Soldiers working within a joint mission structure, you will usually find Joint Qualification Requirements (JQR) for various work roles in documentation like the Training and Requirements Manual (classified) or the NIST NICE Cybersecurity Workforce Framework (unclassified). After reviewing mission, MOS skill level requirements, and work role requirements a leader should be able to map KSAs and objectives from ICTL and JQR sources to develop a personal development road map. This road map should focused on the applicable skill level and include technical, tactical, health, and fitness focus. Today we have access to digital resources allowing us to rapidly gather, understand, and develop synthesized data points. Thus, we can create holistic maps that allow for focused discussion and planning ensuring more focused individual work-role, career, and leader development.

The lynch pin and most important part in developing our future leaders is effective counseling and mentorship (FM 6-22, 2015). Regular, as well as consistent, counseling and mentorship ensure proper development of a clear and concise Individual Development Plan (IDP) that relates directly to learning objectives over a set period. A good IDP addresses how an individual anticipates acquiring various KSAs and Objectives across Institutional, Operational, and Self Development domains over a set period of time (AR 350-1, 2017). Counseling regularly about requirements, progress, and accomplishments builds fundamental strength and trust in our next generation (ATP 6-22, 2014). I understand some of the resources and guidance can be cumbersome, it is vital that you find a good way to capture and articulate the path for those that we are developing to be our next generation. Tap into resources from Army Career Tracker for IDP and community discussion about career management fields; look into MilSuite for other ideas on counseling and mentorship; review doctrine found at the Army Publishing Directorate; look into apps, both Army and community, that provide personal and professional development (see listing below).

Lastly, in order to develop our future leaders, we need to focus on an environment that challenges them and builds grit, the tenacity to succeed and excel while learning from mistakes, and failures in a multitude of situations (TR 350-70, 2017). Every day is an opportunity to learn, mentor, and experiment (ADP 7-0, 2019). In the Army, we should understand the risks we face, and ensure that we coordinate risk mitigation at the appropriate levels, so that we can build future leaders who are risk aware versus risk averse. Today, we can leverage virtual and augmented reality environments to build such adverse environments for training, while ensuring our next generation has the opportunity to face challenges they may not normally face.

"Let me explain... no, there is too much... let me sum up." (Reiner, 1987) Though we live in a more digitally connected world than ever before, I have learned that our developed processes, programs, and products are actually still very effective.

#### **DIGITAL RESOURCES**

NIST Framework: https://www.nist.

gov/itl/applied-cybersecurity/nice/

nice-cybersecurity-workforce-framework-resource-center

Mobile Applications: The Squad Leader; LeaderMap; Performance Triad; Army Comprehensive Doctrine; DFAS, Info2Go; Goal Setting; Joint Electronic Library; PRT; ACFT; GoArmyEd

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## We Need Each Other

Chaplain (Capt.) Michael Cerula, 781st Military Intelligence Battalion (Cyber)

adjusting to this time.

# Officers and NCOs need each other-even if it is just to force you to 'play well with others.'

Now that many of us have more time, finally

learn about your people, and ask them not

just what their needs are, but how they are

#### CCT DON'T NEED YOU!"

Ever feel you could do a better job without someone on your team dragging you down? The officer above you seems incompetent. The NCO you have got, you would never miss if they PCS'd tomorrow. If you feel this way, then guard your lips, for gossip does not strengthen individuals and organizations; it weakens them.

I think the recent pandemic has caused many to pursue what they always wanted -a slower pace. On the one extreme are those not amply employed. On the other, are overworking leaders straining for perfection and not modeling balance of any kind for those below them. What happened to balance, where we focus on the things that matter

the most? Rather than approach a

global pandemic as a break, why not treat it as a question? Do you now question why that

meeting was in person, vs. digital, vs. slide-only? Do you question why you are struggling to spend more hours with the family THAT YOU LOVE? Now I get kids detracting from the ability to work at home and I get the synergy that fellow staff sections can provide more expediently in the workplace, but I wonder why leaders are finally call-

ing their people more today. I think it

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is because leaders always wanted to, but never made the time.

Officers and NCOs need each other – even if it is just to force you to 'play well with others.' People teach us patience and we often have ample opportunities to train and instruct those around us, as we should do so respectfully.

Do you think your officer is an idiot? Then, teach them the right way. Do you loathe working with that 'new enlisted Soldier,' or 'know-it-all NCO?' It is about time we build up those around us, train and develop leaders, and view each person as having intrinsic worth. They are 100 percent priceless – do you believe that? If I was given the option of someone's life or keeping a billion dollars, I would choose their life!

Consider the opportunity to teach someone the right way and develop those around you. Now that many of us have more time, finally learn about your people, and ask them not just what their

needs are, but how they are adjusting to this time. Bonus points are due to those leaders learning family member names.

Remember, you have a counterpart for a reason. Build up and encourage those around you because everyone has value and great worth. Learn what they are good at and respectfully

teach them what they still need help

learning.

# Cyber Battalion Unit Ministry Team Wins INSCOM Top Honors



Since 1980, INSCOM has recognized the outstanding Chaplain and Religious Affairs Specialists at both the brigade and battalion levels during INSCOM's annual training events.

ORT GEORGE G. MEADE, Md. – The 781st Military Intelligence (MI) Battalion (Cyber) Unit Ministry Team (UMT) was recognized by the U.S. Army Intelligence and Security Command (INSCOM) as the Battalion UMT of the Year during INSCOM's Annual UMT Training event.

The award winning battalion UMT consists of Chaplain (Capt.) Michael Cerula, the 781th MI Battalion chaplain,

and Pfc. Nakoya Washington, the battalion's religious affairs specialist.

Since 1980, INSCOM has recognized the outstanding

Chaplain and Religious Affairs Specialists at both the brigade and battalion levels during INSCOM's annual training events. According to the INSCOM operations order, which lists the selection criteria, UMTs are instrumental in sustaining the emotional and spiritual well-being of INSCOM Soldiers, Army Civilians, Contractors, and their families through the exercise of a dynamic and influential spiritual leadership to the INSCOM Command Team.

The UMT selection criteria included (1) Ministry of Presence: how well the UMT integrated, was accessible, visible and involved in the life of the unit; (2) Programs: what programs the UMT developed, coordinated, and conducted in areas such as spiritual fitness and resiliency training events, leadership, moral and ethical decision making, suicide prevention, stress management, strengthening Soldier and Family relationships, Strong Bonds, Deployment Cycle Support Training, prayer breakfasts/luncheons, worship services, etc.; (3) Community Involvement: how involved was the UMT in the greater military community beyond their organization; (4) Technical and Tactical Proficiency: how the UMT demonstrated proficiency in Soldier Common Tasks and showed proficiency as a chaplain and a religious affairs specialist; and (5) Physical Fitness.

#### Being a religious affairs specialist means you have to always be prepared emotionally, physically and mentally.

According to Chap. (Maj.) Peter Baek, the chaplain for the 780th MI Brigade

(Cyber), there are more than 20 battalion-level UMTs under INSCOM, and the battalion UMTs also had to demonstrate their understanding of the Chaplain Corps history, and the religious affairs specialist were judged on their weapons qualification.

Chaplain (Capt.) Cerula and Pfc. Washington were grateful for the recognition, and both spoke of the hard work and privilege it is to serve on a UMT.

"Thank you for this honor. INSCOM is filled with Unit Ministry Teams doing incredible work and I feel humbled our team can serve alongside them. From encouraging Soldiers and Civilians, to providing confidential counsel in moments of great need, this calling has it all?" said Cerula. "I believe every one of us is intrinsically priceless and has a gift to share. I hope you know how truly valuable you are!"

"I am very proud to win the UMT of The Year Award! Being a religious affairs specialist means you have to always be prepared emotionally, physically and mentally," said Washington. "As a team, Chaplain Cerula and I have been working very hard. It feels great to have recogni-

tion of our success. Thank you for this amazing opportunity."

and Pfc. Washington will be recognized by INSCOM with an award, however, with the ongoing pandemic a

date has yet to be announced.





# UCMJ is a Vote of Confidence In Us By a Trusting Nation

Maj. Timothy Minter, brigade judge advocate, 780th Military Intelligence Brigade (Cyber)

This authority given to us to self-regulate is written into statute, but it is not our birthright: it is the vote of confidence in us by a trusting nation.

RMY DOCTRINE IDENTI-FIES MILITARY SERVICE as a "profession" on the ground that the military provides a vital service to society, that it requires expertise and skill developed through years of training, education and experience; honorable service, and a self-regulatory legal and moral

A MANUAL FOR COURTS-MARTIAL U.S. ARMY 1928

framework that gives the military autonomy and discretion (ADP 6-22, paragraphs 1-1 to 1-2). This authority given to us to self-regulate is written into statute, but it is not our birthright: it is the vote of confidence in us by a trusting nation.

The hallmark of the Uniform Code of Military Justice (UCMJ) and related administrative authorities is that the military is generally authorized to hold itself accountable. It is a uniformed commander who is responsible for investigating alleged wrong-doing (10 USC § 7233); it is a uniformed commander who is responsible for determining

how to properly hold Soldiers accountable for misconduct (ART 33, UMCJ), and it is a panel of military members or a uniformed judge who will assess a soldier's innocence or guilt (and if guilty, an appropriate punishment). To get to this point, the military had to overcome a historical distrust of standing armies dating back to the Declaration of Independence.

At present, the U.S. military is the most trusted institution in the United States. Gallup has conducted polling into the American people's confidence in institutions since 1973. At present, the U.S. military is the most trusted institution by a wide margin. In 2019, 73% of respondents reported a "great deal" or "quite a lot" of confidence in the U.S. military. Of the other professions, only 29% of respondents reported similar trust in public education, 23% in newspapers; 30% in the medical system, and 53% in the police. But these institutions were not always distrusted - once, they too were trusted to the same degree the U.S. military is now. Due to multiple societal factors - of which a failure to hold themselves accountable is but one - many of these institutions saw public trust in them collapse.

The Army maintains the prestige of "professional" status in the eyes of the American population – for now – because we are viewed as ethical and competent. We must police ourselves and hold ourselves accountable – regardless of rank or position – if we are to retain this status in the eye of the public.

## CYBER SNAPSHOT: Capt. Timothy J. Hennessy

Former NCO, Military Occupational Specialty: Cyber Operations Officer (17A). Duty position: Company commander for A Company, 782nd Military Intelligence (MI) Battalion (Cyber).

UICK SKETCH: — Direct Commission: Capt. Hennessy was one of the first two direct commissions for the Cyber Branch — Degree: Bachelor of Science (BS) in Computer Science with Minor in Applied Math; he completed

some graduate work with Georgia Tech's Online Master of Computer Science

— Deployment: Iraq and Afghanistan

- Experience: Previously enlisted as a 35N (Signals

Intelligence Analyst) served with 500th MI Brigade and 25th Infantry Division, where he deployed twice to Iraq; attended the Joint Cyber Analysis Course in 2010 and became a 35Q; during his time as a 35Q, he was a Close Access Network Operator and deployed to Afghanistan twice. He separated from the Army in 2013 to focus on his family and education during which time he received his BS degree and worked as a software engineer until getting picked up for the Cyber Direct Commission program in 2017.

— He has set aside his pursuit of a Master of Science (MS) degree in Computer Science to focus on "being the best Company Commander, husband, and father I can be." He will seek to use the Army's Advanced Civil Schooling program to finish his MS at GA Tech.

#### **RECENT ACCOMPLISHMENT:**

"My most recent accomplishment, as well as the highlight of my career, has certainly been becoming a company commander. Many have been articulate at explaining the honor and privilege of being a commander, despite my best efforts I could never imagine being able to describe the immense amount of pride I feel at having this opportunity."

"Most people never thought a Direct Commission would be an ideal candidate for command, nor did they think we would

Many have been articulate at explaining the honor and privilege of being a commander, despite my best efforts I could never imagine being able to describe the immense amount of pride I feel at having this opportunity.

> be allowed to. Thanks to innovative leaders, who are willing to accept mistakes and risks, here I am. I have enjoyed being a capability developer and building capabilities, but it pales in comparison to being a commander. Caring and leading our nation's most valuable assets is a privilege I will relish till the day I die."

#### ON WHY HE CHOSE THE ARMY:

"I was in my early 30's working as a software engineer and going to school. I often found myself reflecting on the cool missions and fantastic teammates I had while in the Army. It became depressing as I realized the best part of my life was when I was a Soldier and that was behind me. I did not feel like at 30-something years old, anyone should be in that position. As luck would have it, the Army brought the Direct Commission program online about a month later."

"I considered the Navy and the Air Force as well. My understanding of the Navy's Direct Commission program was they only allow Direct Commission officers to serve for five years then they are not eligible to continue service. Even though some might be interested in serving for a short time, I wanted the option to continue serving. Why invest yourself into something that is not investing into you? I wanted to be able to dedicate myself to

> something that would not just let me go at the end of five years. Above all else (cheesy Air Force joke attempt), once I knew the Army had a program no other program had chance."

#### ON WHY HE CHOSE ARMY CYBER:

"I wanted to work within a proven community of excellence combining my previous Cyber experience with my Computer Science education. I also kept in touch with a handful of Soldiers serving in Army Cyber and was convinced I could



come back in and actually work as a developer."

#### ON WHAT HE WOULD TELL SOMEONE CONSIDERING ARMY CYBER:

"This entire experience has been incredible! I have never been more impressed nor have I ever been more humbled by the level of talent in Army Cyber. I have learned and been challenged more as a Cyber Officer than from any other experience. There are many great benefits to serving. Among them is the opportunity to try new things and push yourself in ways you never would have done on your own. I may have come back in to be a software developer for the Army, but after a few short years the Army provided me numerous other opportunities. There is something for everyone. If you are willing to put in the work you will have opportunities you never imagined."

#### **FUTURE GOALS:**

"Lead my company to new heights. I really want to motivate and inspire my Soldiers to maximize their potential for their benefit and the benefit of the Army. I want to inspire a new generation of problem solvers ready to take on any problem."

#### FAVORITE QUOTE:

"I do not have a favorite quote and I could not only name one person I admire. I have so many great people in my life. I would like to use this opportunity to highlight the incredible leadership we have in U.S. Army Cyber Command, especially 780th MI Brigade. From the Cyber Training Battalion to the 780th MI BDE, we have the best leaders. They genuinely care about their Soldiers and civilians. Best of all, they are open minded and willing to do whatever it takes to maximize human potential to accomplish our missions while never forgetting the importance of the humans behind the machines."

Y NAME IS AMBER FITZWATER and I am the new Sexual Harassment/Assault Response and Prevention (SHARP) and Sexual Assault Response Coordinator (SARC) for 780th Military Intelligence Brigade. I am originally from Michigan; however, I have lived all over, from Hawaii to Germany. I have lived in Maryland for the last six years. Prior to coming to 780th, I worked as the SHARP Victim Advocate (VA) at Asymmetric Warfare Group. I have a Master of Science in psychology with post graduate certification as a clinical trauma specialist and



FORT GORDON, Ga. -- Capt. Timothy J. (TJ) Hennessy, assumes command of A Company, 782nd Military Intelligence Battalion (Cyber) during a Change of Command ceremony hosted by Lt. Col. Wayne Sanders, commander of the 782nd MI Battalion, at Freedom Park on May 1.

two boys,tt and our sometimes-reluctant pup.

My passion for the SHARP program begins with helping victims to acquire the support and services they need, to empower them on their journey of healing, and encourage them to become strong leaders in changing our culture around sexual harassment and assault. The best way to deal with sexual harassment and assault is to prevent it in the first place. To do this we must educate our Soldiers, Family members, and peers as to what the realities of these atrocious acts actually look like. Through education, discussion, and understanding we will learn the warning signs of harassment and assault, how to intervene, and how to support victims together. Treating all people with dignity, fairness, and respect are the pillars that the SHARP program was built on, but this is something that requires a team effort. I look forward to working with you all to change our culture and support our victims.

advanced training in the treatment of PTSD. On my off time, I enjoy outdoor activities with my



#### DoD SAFE HELP LINE: 877-995-5247



PRAETORY

力

exercise a service

# 2020 Sexual Assault Prevention Month The Committment Pledge

Sexual Assault Awareness and Prevention Month (SAAPM) is an opportunity to focus on the importance of preventing sexually based offenses with the support of our Soldiers, Sailors, Airman, Marines, Civilians and Family members.

The SAAPM theme for 2020 is building cohesive teams through character, trust, and resilience; protecting our people protects our mission.

This year's theme builds on the concepts of shaping culture, organizational climates, and individual responsibility to create an environment of mutual trust, and promotes personal, and unit readiness, and prevents and, mitigate misconduct.

We remain steadfast in our efforts to raise awareness about the many forms of sexually based offenses to prevent crimes of sexual violence, provide care for victims, enforce the law, and prosecute offenders.

We must continue our work to eliminate sexual assault from our society, and promote safe relationships at home and in our communities.

Fort George G. Meade, the nation's premier platform for intelligence information and cyber operations, values education, and taking individual action, which are paramount to preventing and combating a culture and climate at seeks to undermine our military community. We cannot afford to standby and be and observe harmful actions.

Each of us has a role to ensure we live and work without the threat of sexually based offenses. Sexual violence impacts mission readiness and diminishes our effectiveness as a combat force.

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Individual responsibilities must be uncompromising. Individual inculcation must be proactive, and relevant to develop innovative ways to prevent any form of sexual violence against our military team, DOD Civilians and Family members. We each have a personal and moral obligation to recognize, stand up, and speak out against sexually-based expressions, regardless of time place or situation.

As a proud member of the United States military team, I pledge to be a force multiplier by continuing to lead the shaping of a culture of respect, embracing of our diversity, and understanding personal, and professional boundaries by creating an environment of mutual trust that promotes personal and unit readiness, and prevents, and mitigate misconduct in our Fort George G. Meade community.

# Analog Leadership In a Digital World

Command Sgt. Maj. Kelly J. Barnes, command sergeant major, 781st Military Intelligence Battalion (Cyber)



## If you are interested in developing future leaders, you must be interested in the methods and means they use to communicate.

N A RECENT INTERVIEW WITH Joe Rogan, Elon Musk suggested that humans were well on their way to becoming cyborgs and, in fact, may already meet the basic definition of cyborg. I think he might be right. Do you remember the feeling you had the last time you lost track of your phone? Would you describe it as close

to a mild state of panic? Do you have a daily routine that involves verifying the location of your smart device when you either depart to or return from work? Are you even aware of how many times you pick up that device and look at it on a daily basis? Do you know why you picked it up and looked at it? We have become so reliant on our phones for day to day function, losing your phone is tantamount to losing an essential organ or limb. All hyperbole aside, our reliance on technology to execute even the most basic tasks has never become more salient than during the current crisis. The question becomes, how do we take advantage of technology

to continue to develop the future leaders of our force? I believe the answer may be simpler than it seems.

The first thing you, as a leader, need to recognize is your Soldiers and Civilians, especially the younger ones, grew up with technology in their hands. They don't know about dial-up internet, rotary phones (thank goodness those dark days are behind us!), or that hashtag used to be pound sign. They have a strong social media presence and operate off multiple platforms to communicate and share ideas. Their exposure in the digital realm far exceeds what some would be comfortable with. The second thing you, as a leader, need to recognize is this is a good thing. If you are interested in developing future leaders, you must be interested



in the methods and means they use to communicate. You also need to understand what's important to them. Where do they derive their sense of accomplishment and purpose?

I have seen the use and integration of technology throughout our organization to allow our Soldiers and Civilians to continue to meet training objectives, develop unique methods to broaden technical skills, and stay connected with one another. In fact, it is my belief that without the myriad of platforms made available during this time of crisis, we would not have been nearly as successful as we have. This pandemic forced us to look hard at how we engage with our force. Which brings me to my final point.

Analog leadership is still critical to

developing leaders. Direct one on one interaction, counseling, mentorship, and basic advice on career progression cannot be replaced by technology. Only true leader engagement and concern in the welfare and development of our force will provide us with the type of leaders we need to take us into the future. In our organization, right now, exists the leaders who will replace the senior leaders of this organization. Use technology to stay engaged, identify talent, and develop the future.



#### Embracing the Future

1st Sgt. Carlos Picazo, 781st Military Intelligence Battalion (Cyber)

#### Being a steward of the profession of arms means preparing the future commanders and leaders at all levels for future challenges.

XTENSIBILITY IS A SOFTWARE ENGINEER-ING and systems design principle that strives to factor in future application and growth of their system or program. Whenever we take up an endeavor that is important, difficult, and time consuming, we want to make sure we future proof to the greatest extent possible. It makes sense to do so in order to avoid repeating that task shortly thereafter. When the future of our Army and the Soldiers in them hang in the balance, it is critical we get this right, lest we set back the organization a generation of progress. Being a steward of the profession of arms means preparing the future commanders and leaders at all levels for future challenges.

Back in the turn of the century, cellular telephones were not common, and pagers were all the rage. Smart devices were unheard of and communication was generally slower, and more personal. Some of us joined the ranks before the turn of the century, when

the Y2K bug was the technical challenge looming over our heads. Most of the senior leaders rose through the ranks during a time where we were deeply engaged in Iraq and Afghanistan. In contrast, many

of today's leaders across the force joined within this last decade and have utilized group chats before they first put on combat boots. Regardless of when they enlisted or commissioned, today's leaders must still connect, inspire, and motivate our new generation of Soldiers if we are to properly develop them into the ones who will take over our units across the Army. There are many approaches to building a prosperous climate that fosters growth, but I believe effective communication and personal engagement are fundamental to any successful approach. Think of them as core aspects of a modular-based design.

There is value in being able to draw upon those experiences we have and the lessons we learned along the way, but we must be wary in how we draw upon them. As someone who has been guilty of saying "Back when we invaded Iraq..." or "Back in the..." I can assure you, that there are few ways to lose your intended audience faster than sprinkling these in too often. That often results in missed opportunities to inspire or influence the young Soldiers. Because, while a leader may have valuable experience and insight, it is not very useful if he or she gets tuned out early in the conversation. Make no mistake, communication is a two-way street and those being mentored must make the effort to understand their superiors or mentors. However, to maximize chances for successful communications, we must make the extra effort to overcome any barriers that may come with a generational gap. The quote often attributed to Pres. Theodore Roosevelt is very relevant in this sense: "People don't care what you know until they know how much you care." That is because once someone believes you are invested in their development and are not a burden on your time, they are more prone to stop you in the hallway or stop by the office to ask you a question about their future.

Communication has drastically improved the speed in which we disseminate information. We can put out changes to our next formation or pivot on an important project to countless individuals by simply typing a quick message. Whether it be via chat, email or SMS text messages, the speed is a vast improvement over

As someone who has been guilty of saying, "Back when we invaded Iraq..." or "Back in the..." I can assure you, that there are few ways to lose your intended audience faster than sprinkling these in too often. the call trees and personal end of day formations many of us experienced. However, the tradeoff is often personal contact in the exchange of information. The way we manage information has changed, but leadership funda-

mentals are still very much relevant. In order to be an effective leader, you must be able to influence your Soldiers and earn their trust and confidence. This can only be done by leaders who are engaging the members in their organization and demonstrating they are exactly that.

These traits are not only important today, they will continue to be important attributes of leaders to for the foreseeable future. Think of it as reusable logic. That is why when developing the vision for our future leaders, it is important to remember that even as technology advances, information and systems management is no substitute for leadership and vision. Leaders must influence and inspire by setting the example and clearly articulating the vision for them and the organization. Never forget this is a people business, whether combat arms or support, it comes down to taking care of and developing our most precious asset, our Soldiers. With our brothers and sisters in arms, we cannot afford to fail.

13

## Another Mission Command Discussion

Capt. Nolan Miles, Detachment-Hawaii, 782nd Military Intelligence Battalion (Cyber)



# We need leaders in the branch who will not shy away from a terminal nor an operations order.

HE 780TH MILITARY INTELLIGENCE BRIGADE (CYBER) has brought Mission Command to the forefront of our minds - indeed, in the past year there have been numerous articles about the subject already in The Byte. Essentially, the philosophy of Mission Command encourages leaders to specify an end-state they want their units to achieve without mandating the series of steps to achieve it. This is in contrast to Detailed Command. where leaders dictate tasks and subordinates follow orders with little or no deviation. The former allows for greater agility and encourages decision-making and prudent risk-taking at lower echelons, while the latter provides absolute certainty in situations where the wrong action can be catastrophic.

Most view these two philosophies at opposite ends of a spectrum and that the correct balance between them is what constitutes effective leadership. For today's military especially, the correct balance between them leans heavily towards Mission Command to maintain flexibility and rapid adaptation in an ambiguous and constantly changing environment.

I propose Mission Command actually falls in the middle of the leadership spectrum. The ineffectiveness of micromanaging leaders is often discussed, but not the ineffectiveness of leaders who fail to adequately create shared understanding with members of their unit. This style of "Detached Command" creates a disconnect between a leader and his or her subordinates or between a leader and the realistic constraints of cyberspace.

ADP 6-0 states commanders must be able to both visualize and describe their desired end-state and operational approach. In the first domain, this visualization and description requires some knowledge of weapon systems, logistics, tactics, and so on. In the fifth, it requires knowledge of information technology at a higher level than what can be learned through a course, project, or CTF. It requires the capacity to describe the forest by having an understanding of all the trees within it. Visualizing and describing a desired end-state becomes especially difficult in cyberspace since the domain is complex and conceptual by nature.

I received a brief a few months ago which exemplified this difficulty. The brief explained U.S. Cyber Command's largest planning gap occurs at the operational level. I agree with this sentiment, and I believe the Joint Cyber Centers and USCYBERCOM Cyberspace Operations-Integrated Planning Element (CO-IPE) were created as an attempt to address the issue. Strategic and tactical plans for offensive cyberspace operations are objectively easier to develop than operational ones. At the strategic level for cyber, many of the technical details are abstracted away. At the tactical level, the requisite knowledge can be taught through training.

However, offensive cyber operational-level planning and execution is driven by an understanding of information technology at the scale of an adversary country or organization and the ability to conceptualize and convey a desired end-state at that scale. There are currently two salient leader stereotypes within offensive cyber for the Army. The first is a technical specialist who



#### **COMMAND** PHILOSOPHIES

believes every problem is solvable with better tools, infrastructure, and expertise, and any military processes or frameworks are an unfortunate tax to bear. The second believes leading military operations is the same across all domains, and an understanding of computers to any degree is only a side effect of being around them so often.

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Any competent individual within our ranks knows both perspectives are mistaken, yet each of us has our own bias towards one or the other depending on our experiences and skillsets. This bias consistently causes us to become "Detached Command" leaders; either we do not understand the technology to be able to visualize our goal, we do not understand how to frame a problem in a military context for our Soldiers, or we do not understand how to generalize beyond the tactical fight. Our inability to do this, especially at the operational level, has led to wasteful resource allocation, confusion, and lack of results across the force. Many are quick to point out several successes we have had, especially within Joint Forces Headquarters-Cyber (Army). However, I argue these tactical gains do not fit under a well-understood operational approach across the command and the effects we have achieved could be deeper and longer-lasting. Persistent Engagement still requires concentration and tempo to be an effective strategy.

As leaders, each of us must strive to recognize our cognitive biases and overcome them. It is not enough to simply create a commander's intent and then delegate; we must ensure the intent is rational and mutually understood by our Soldiers. Though Mission Command stands apart from Detailed Command, our end-states must still be detailed. We need leaders in the branch who will not shy away from a terminal nor an operations order. But more importantly, we need those who can take an understanding of both technology and military decision-making and bring it up to the operational level. With this, we can shape our successes into effective offensive campaigns which will allow us to gain superiority within cyberspace.

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## Hacking Quarantine: How Technology has Enabled the Continued Training of Cyber Warfare

Sgt. Matthew Taylor, digital networke exploitation analyst, Bravo Company, 781st Military Intelligence Battalion (Cyber)

# With the onslaught of COVID-19 in our digital era, the 781st Military Intelligence Battalion (CYBER) has proven: Every problem is an opportunity.

IME FLOWS ONWARD, WITH CHALLENGES against the mightiest of empires caught in its current. Change and adaptation are key to survival with failure leading to the ash heaps of history. No less potent is this truth today than it was yesterday. Just as consistently true and enduring as time has been our Army's ability to adapt to change. You can point to many events since our inception to see this is true. With the onslaught of COVID-19 in our digital era, the 781st Military Intelligence Battalion (CYBER) has proven: Every problem is an opportunity.

Military leadership owes it to our Nation's Soldiers to not only maintain accountability of them but provide stable ways for them to train, develop, and grow. The Non-Commissioned Officer (NCO) Corps is at the forefront as vanguards of this sacred duty. We face challenges ranging from troubling suicide rates to ever-expanding training requirements, and-specific but not unique to the Cyber Domain-a demand for complex technical expertise. These requirements haven't stopped as we have adjusted to the challenges of COVID-19, and thanks to our technological edge we have found ways to not only

survive—but thrive. We will take a quick look today at some of the notable ways our rapid workplace evolution has occurred, specifically: Commercial Virtual Remote Environment (CVR), chat applications, and the Immortals' Training Platform.

CVR has been key to the Department of Defense's large-scale telework efforts. It has enabled the hosting of virtual meetings with many capa-bilities. Leader Professional Development (LPD) as well as Sergeant's Time Training (STT) have continued as CVR enables us to

with the help of

connect and present digitally despite physical separation. I personally have hosted and been in the audience of multiple STTs and LPDs and found it a great tool. Observations from fellow Bravo Company NCOs have highlighted unexpected benefits of our new technological use ranging from increased Soldier participation in classes, to creating digital channels geared at specific training topics such as: mentorship, 350-1 training, and Job Qualification Requirements (JQR) completion. Growth, and perhaps most importantly-connection-with our Army family continues. These tools have enabled us to show our Soldiers we care. Bravo Company's own 1st Sgt. Danielle Bellin highlighted this benefit of our technological war chest and its undeniable importance. In our increasingly connected world, there is a peculiar sensation of isolation and disconnection from one another. Bravo has taken to addressing this specific challenge in fun and noticeable ways. One example is the weekly photo contests Bravo hosts through our Signal and Microsoft Teams channels where pictures of family, pets, and anything else from confinement are shared with one another and a "winner" is picked that Friday.

Mission readiness has been greatly impacted by COVID-19 in the interim, and aside from ensuring mental health and wellbeing is addressed, Bravo Company leadership has attacked the issue of readiness head-on in multiple ways. By providing a place to share PT accomplishments on Signal and Microsoft Teams, squad leaders-can ensure their Soldiers are keeping physically fit and continuing to prepare for the upcoming Army Physical Fitness Tests. This channel not only fosters healthy competition, but also provides a method for accountable tracking of Soldier fitness. 350-1 training has also been shifted to entirely digital means, being hosted through Microsoft Teams. Classes on important topics such as Sexual Harassment / Assault Response & Prevention (SHARP) continue and the easy access to participant lists make accountability for training status easier on unit leaders.

Lastly, training of our Cyber Warfighters has been made possible by the rapid rollout of the Immortals' Training Platform (ITP), developed by Maj. Michael Kranch. ITP has enabled NCOs to keep their Soldiers' skills honed and build familiarization among non-cyber MOSs that find a home in our unit, keeping us mission ready. Training modules range from topic areas like Network+, Security+, and Python. The concept of "gamification" to make training more enjoyable, implementing a leaderboard to foster friendly competition, was a key ITP design feature. Sgt. Christopher Walden highlighted the fact that leaderboards and individual modules have enabled NCOs to "identify areas of interest for specific Soldiers, or areas where they

excel" stewarding professional growth within the organization. ITP has also enabled the Junior Enlisted Soldiers to share their skills and expertise in a rank-agnostic manner and continue working on JQR requirements-many of which include networking related content available on ITP. The impact of this tool is immediately recognizable among the NCOs in helping our digital warfighters become more potent in their mission to deny, degrade, destroy, and disrupt adversarial cyber efforts.

Mission readiness stands. The 781st MI Battalion has hacked the limits dictated to us by this pandemic and we are stronger for it. With these digital tools at our disposal unit leaders can train to their Mission Essential Tasks (METs) in a trackable, flexible manner.

Our NCO Corps will continue to adapt and overcome with alacritous haste and the advantage given us by technology. I realize what a blessing these tools have been in allowing me to develop my own subordinate while maintaining accountability for him, and connection with him. There is no doubt as we emerge from this pandemic that our unit will utilize these tools in ingenious ways. We owe it to ourselves, and our nation. In closing I encourage you as Army leaders and my fellow compatriots to ask not if something is possible, but rather to ask how soon we can make it possible.

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## Art Instillation Coming This Summer

Master Sgt. Cory MacNeil, 780th Military Intelligence Brigade (Cyber)

Achievers create their environment. But rather than waiting for a few achievers to emerge, leaders can challenge Soldiers to bring something they love outside of the Army to the inside of the Army.

OME PEOPLE DOODLE DURING meetings to ignore the irrelevance of the meeting and get lost in their own drawing world. Some people doodle during meetings to enhance their concentration on the meeting by giving a subordinate task to their hands, freeing up the ears to listen with cognitively undistracted attention. I wondered which type of doodler Chief Warrant Officer 4 Tony Leota was as his pen ran, skidded, swirled, hopped, splattered, swept, weaved, traced, imagined, danced over the paper he had placed on the folding table top provided

to each seat in the auditorium.

His pointed questions during the Q and A drew from the speaker's words, even drew

from what the speaker did not mention, marking him as a listening doodler. I watched the drawing unfold, grow, stretch, reach, fill, push, explore, discover, enliven, breathe.

Months later, Leota gave a presentation recounting his experience at Acme Widgets during a yearlong training with industry. A key point of his presentation was the description of the culture of individual and organizational creativity fostered at Acme Widgets.

—Welcome to Acme Widgets. That's a sharp suit, Tony. You look great. Don't ever wear it here again.

All developers at Acme Widgets punch in and out eight hours on the clock five days a week. Delivering cutting edge code is not an option. But which eight hours of the day are spent coding is up the developer. If the sun shining through the crest of clean Florida A-frame waves two hundred meters away is making it hard to concentrate, grab one of the company owned surf boards from the quiver and hang five for an hour. When a developer with noodle arms feels the juice of a peak, a rush of endorphins rewards the brain for charging a closeout wave, and the subconscious delivers the goods for getting difficult code in line. Toweling off and punching in on the clock, the developer can't not think of code. The clock is not a timer to chain developers to their desk chairs. The clock is a surprise reminder

#### -Welcome to Acme Widgets. That's a sharp suit, Tony. You look great. Don't ever wear it here again.

that eight hours just flew by; there is still wonderful life to live before you return tomorrow, refreshed, rested, reenergized; the subconscious still dropping inside the wave of intriguing questions and conundrums.

During the Q and, A I askedt Leota if there was a way to transplant what he had experienced in the creative culture of Acme Widgets to our situation in the Army. —No.

If I wanted a concise answer, I sure got one.

—Aren't there some aspects of the creative culture we can emulate?

—At Acme Widgets, we wore what we wanted. The Army tells soldiers what to wear and exactly how to wear it. At Acme Widgets, developers came and went according to the creative itch. The Army tells soldiers where to be every hour of the day, and the Army likes to start the day early. At Acme Widgets, we only had meetings when it was essential to keep creative people aligned. The Army has meetings to plan meetings.

Adam Grant writes in Originals: How Non-Conformists Move the World, about his time consulting for a call center. Despite air conditioning, office chairs, scripts for dealing with customers, free paper water cooler cups, provided break room, steady paycheck, call center work is hard. Call center callers either bother customers by disturbing them at home, or receive

> calls from disgruntled customers—none of it is pleasant work. A typical call center goes through an annual employee turnover of 80% each year. That means every

365 days, a call center must orient—here's your desk, your head set, your script—and train—do not escalate voice level, do not respond to insults to the company, do offer a 20% discount to next month's bill if the customer indicates they would like to terminate service—eight employees for every ten on the payroll. And it is not only entry level employees who leave just after fitting into the groove of work. Supervisors and managers also turn over at discouraging rates.

A call center brought Grant in to help them discover how to beat the well-known odds of employee turnover. Grant was not brought in to give a rah-rah, go call center! pep talk. They brought Grant in because he deals with data, hard numbers, measurable trends, and he got to business collecting everything recordable about employee behaviors and habits.



Among the piles of data collected, he made a list of the employees who beat the odds, staying on at the job after 365 days. He made a list of employees who became supervisors quickly. He made a list of employees who became managers ahead of the policy time table. He made a list of employees who received the highest consistent customer ratings. He made a list of employees selected as employee of the month for multiple months. With these lists, Grant looked for traits, habits, preferences, history shared by employees. Something unexpected emerged.

The majority of these high achieving employees used Firefox browser on their work computer. PCs running Microsoft come

with Edge installed. Google Chrome books arrive with Chrome installed. Apple computers ship with Safari installed. No computer out of the box or off the shelf comes with Firefox installed. While the presence Firefox itself is not a significant trend, it tipped Grant off to an important insight: achievers do not accept the default; achievers create their environment.

Frustrated with Microsoft Edge? Install Firefox (assuming you are not on a locked down government computer. Ok, Chief, you got me there; but the principle is the same). Leota has a strong point, it is difficult to be creative when the culture and social norms of every aspect of work life are regimented and stiff.

Psychologists enjoy experiments like the following. Group A (control): write down every use you can imagine for a brick in ten minutes. Group B: answer as many math problems as you can in ten minutes, then write down every use you can imagine for a brick in ten minutes. Group C: draw a tea cup and saucer from as many angles as you can for ten minutes, then write down every use you can imagine for a brick in ten minutes. Spoiler, Group C, perspective latering tea cups, always thinks of most uses for a brick and thinks of the most creative uses for a brick (creativity inspires creativity); Group B, math your way to creativity, always fares the worst (the mind is slow to transition from linear, rule following thinking to multi-perspective creativity).

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The Army is going to continue to wear uniforms. The Army is going to continue to start its day at 0630 in an extended rectangular formation. But there are opportunities, if we look for them— and create them— to engender a culture of creativity alongside our culture of regimen.

I gave Leota a stack of 18 x 24-inch white foam core poster boards and a fat black marker. I put up a sign prominently in the middle of a well-lit, empty white wall: art instillation coming this summer. It is not enough to put Soldiers at ease in formation to explain a new policy on

#### Achievers do not accept the default; achievers create their environment.

ideation and creativity in the work center, then file from the left, column half-left, into the work center. Grant identified the people who broke through the norm to shape their environment. I propose we gain an advantage over that passive method. What if instead of waiting for a few Soldiers break through the norms to have some reverberating creative influence, leaders initiated opportunities for unhindered creativity in the work place?

What creative activities should we engage? Your soldiers already know, but here's the catch—don't ask them. Dr. John Sherry University of Notre Dame engaged in a research partnership with a baby food marketer to try to get a leg up on baby food competitors. The marketers performed the status quo research, asking a panel of parents what they look for when they choose a baby food.

—I look at the ingredients list and nutrition label.

-I compare prices.

6

—I buy what I see my responsible friends feeding their children.

All these responses sound adult, sound mature, sound reasonable—which is the first tip off to Sherry this is not why they make their baby food choices. Sherry had the insight to perform a different form of research by not asking any parents any questions. Instead, he sent researchers to the baby food isle of grocery store isles to surreptitiously observe shoppers.

Among label reading and price

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comparison, the researchers observed adults smelling the jars—sealed jars—as if testing for pleasant scent; squeezing the jars—glass jars—as if testing for ripeness; held the jars up to the light to get a better look—as if inspecting for freshness of the contents. No one mentioned smelling and squeezing and peeking back in the consumer panel. Instead of jazzing up the ingredients list, or competing on price, or doubling down on advertising, designers went back to the drawing board to redesign the sealed glass jar to what we ubiquitously know today: small, like peach;

NIEVERS rounded corners, like an apple; less label, so parents can see through the glass; less giggling baby face, and more color illustration of fruits and vegetables.

Instead of asking Soldiers what it would take to get them to 'stay Army,' ask them what they do after work, or will be doing this weekend. Then think about how to bring something they love outside of the Army to the inside of the Army.

Art instillation coming this summer.

#### "Cyber Dragon" by Chief Warrant Officer 4 Tony Leota.

Next quarter's BYTE theme, "Recognizing issues and reccommending solutions," will need creative, provocative, perspective bending artwork. Send a sample or sketch to steven.p.stover.civ@ mail.mil no later than August 1, 2020.





20





#### Leadership Through the Looking Glass: Growing Commanders in a Digital Stone Age

Craig Morris, deputy chief of planning, 780th Military Intelligence Brigade (Cyber)

As tomorrow's leaders look back on the present, many will see an image easily described as a digital stone age – not unlike our current view of outdated technologies from the late 20th century.

S TOMORROW'S LEADERS LOOK BACK on the present, many will see an image easily described as a digital stone age – not unlike our current view of outdated technologies from the late 20th century. Whether we apply Moore's Law, Edholm's Law, Koomey's Law, or a variety of any other "laws" relating to the doubling of capacity, power, or computing speed, the essence of technology and mankind's quest for its improvement

promise that tomorrow's world will be redolent of an unforeseen topsy-turvy wonderland. Navigating this complexity will require strong leadership,

anchored in authenticity, effective communication, and efficiency.

Each morning, as we begin our daily routines, we're confronted with a brandnew micro-world, one that is consumed with an ever-expanding abundance of information and data from text messages, to social media, to workplace collaboration sites, often all in the palm of our hands. Tomorrow's commanders are already faced with the dilemma of determining what information they need to make calculated, risk-reduced decisions effecting personnel safety, mission success, and national security. Navigating through this vast amount of data requires leaders to be professionally, personally, and organizationally wise, trained and educated to ever-rising standards. They're expected to sift through an influx of social-media-spurred misinformation and see past the agenda-based

hollowness of disinformation, while simultaneously ensuring fairness, professionality, and empathy for those they lead. To achieve this, they must know themselves, and they must be authentic. Though the method of exhibiting authentic leadership may differ from person to person, the essence of achieving authenticity is the same: determining one's true purpose and direction. This starts with honest self-reflection and awareness of one's preferred leadership style and methods of leadership to which they best respond; requiring integrity, sincerity, consistency, and impartiality across all facets of life. A leader's purpose drives them towards their goals, whether knowingly or unknowingly. It often serves as their own internal motivation. Their direction must be free from egocentric desires, it must not be solely self-serving, but instead self-regulating, and transparent. None of these elements alone can make a focused, authentic leader, but combined, they are essential for gaining trust and loyalty from others, whether subor-

# Navigating this complexity will require strong leadership, anchored in authenticity, effective communication, and efficiency.

dinates, peers, or superiors.

It is no secret that effective communication is an important aspect of any relationship, perhaps the most important. In a

dynamic world, methods and styles of communicating change so rapidly that society can barely keep pace. New applications used for communicating (desktop and mobile) are continuously integrated into the modern work environment, a trend that will reasonably only increase as technology advances. Adopting and integrating cutting-edge technologies ensures confidentiality, integrity, and availability of data and communications; critical components of successful leadership and decision-making. However, the difference between effective communications of the future and that of today may not only exist in our workforce's physical and logical layers, but may also be reflected in its persona layer, with the flattening of a commander's virtual OODA-loop (a strategic decision-making process coined by retired Air Force Colonel John Boyd and acronym for Observe, Orient, Decide, and Act). This protracted flattening is already being fueled by increased transparency that newer generations demand, and advancing technology provides. Today's youth are not unlike those of the past. They ask, "Why?" Not to question authority, rather to gain understanding of cognitive approaches used in decision-making. They are often the most technologically advanced sector of society, keeping up with the latest trends in communication methods, computing technologies, and data manipulation. Future leaders must embrace the transparency demanded by this high-tech youth and encourage feedback on their own leadership styles and decision-making processes; not as an effort to solicit defiance towards authority, but rather to garner a spirit of inclusivity, gaining valuable insight into the most up-to-date technologies, ensuring the highest levels of integrity and security are maintained for

their institution's information environment. Leaders of tomorrow must not only be coaches and mentors, they must also be protégés and mentees, able to accept feedback on their successes and failures, in a journey to grow both professionally and personally. This type of collaborative feedback, or reflective engagement, can help leaders avoid confirmation bias, yielding meaningful, comprehensive results. Tomorrow's most successful commanders will redefine effective communications, gaining an advantage from increased transparency by strengthening organizational inclusivity, and welcoming feedback from not only their superiors, but also subordinates.

In our quest to create successful commanders for our indeterminate future, efficiency of workplace procedures and personnel management cannot be disregarded. Effective organizations must have well-communicated, shared goals; achieving efficiency in a complex work environment need rank toward the top. The nature of complexity assures us of unpredictable effects linked to command decisions, resulting in occasional worst-case and best-case scenarios. Inevitably, command decisions will result in outcomes that cannot be wholly accounted for, due to unpredictable external influences. An important way to mitigate the effects of those unknown outcomes is to create an efficient work environment, based on competency and mutual respect. When commanders create high levels of efficiency among their workforce, compensating for the effects of unpredicted externalities is simplified -- mitigating latent financial, personnel, or security-related costs. Smoothly running processes reduce the time required for dynamic decision-making, with potential savings in both man-hours and operating costs. This requires a streamlined planning process and a deliberate approach for reaching resolutions in times of conflict or disagreement; grounded in a shared workforce-development philosophy. Efficiency can be a prophylactic for the unknown, and in a complex digital world where the reality of tomorrow is opaque, creating an efficient work environment is a cost-effective way to get ahead of, and limit, the impacts of unpredictability.

There can be little doubt that commanders of tomorrow will be forced to make leadership decisions in environments that currently do not exist today. Though impossible to predict exactly what the future holds, leaders with self-awareness and foresight to combine both the successes of the past with the organizational and societal benefits of advanced technologies, give themselves a distinct advantage in a complex post-modern world. The strengths of those leaders and their decision-making processes must be anchored in authenticity, effective communication, and efficiency. Applying those tenets allows us to take what we already know, and go beyond what we can currently imagine. With history as our crystal ball, we gain clarity on the world beyond the looking glass.

## Developing Tomorrow's Leaders, Today: Professionals in a Digital Era

Master Sgt. Quincey Welch III, battalion command sergeant major; 1st Sgt. Rico Rico, first sergeant, Alpha Company; and 1st Sgt. David Boyer, first sergeant, Headquarters & Headquarters Company, 915th Cyber Warfare Battalion

The challenging task of leading these impressionable Soldiers, and providing a sustained sense of job satisfaction is the primary responsibility of our current leaders.

EVELOPING TOMOR-ROW'S LEADERS IN THIS digital era is no simple task. There is little debate that the Soldiers joining today's Army are technically savvy and eager to apply their capabilities when given the chance. The challenging task of leading these impressionable Soldiers, and providing a sustained sense of job satisfaction is the

primary responsibility of our current leaders. Some leaders may have found their stride when it comes to leading our newest batch of Soldiers, while

others may be missing the mark. With no doctrine to guide us, leaders need to take their cues from the observations made within their day-to-day interactions with this new generation of Soldiers. These new Soldiers require our utmost effort, and a slight adjustment to our approach of mentorship and guidance. So, how can we inspire and lead these new Soldiers in this digital era? Here are some tips that we have observed from the foxhole.

The first thing leaders need to do is provide purpose. The days of giving directives to your subordinates without telling them why such a task is required, should be reserved for time-sensitive operations that are far removed from a garrison setting. If leaders do not take the time to provide purpose (or explain why) for the directions given, they may want to take a moment and read FM 6-22. The Army's official definition of Leadership states that Leadership is, "the process of influencing people by providing purpose, direction, and motivation..." If leaders took the time to ensure their subordinates were aware of how they are contributing to mission success, they may find subordinates more inclined to take pride in their role within the organization and their effort to succeed.

The second thing leaders need to do is embrace, and recognize the power of chaos. This is a direct reference to Brafman and Beckstrom's book, *The Starfish and the Spider*, a book about organizations that achieved greatness by decentralizing leadership. The Army naturally operates in a decentralized manner, within the parameters of mission command, but we have never naturally embraced chaos. The power of chaos isn't

"It doesn't make sense to hire smart people and tell them what to do. We hire smart people so they can tell us what to do." about uncontrolled chaos, rather it is about a small change that has impacts across the entire organization. Embracing the power of chaos can encourage creativity,

outside the box thinking, and enable a group approach to problem solving. In other words, our young Soldiers need to be given a chance to contribute to the end state of missions and courses of action that we may take. This can manifest itself within a young Officer on staff, or that young Soldier within your section that may have an out-the-box solution for the current mission your organization is about to embark upon.

#### Two crucial organizational adjustments

With respect to the previously mentioned mentality among today's subordinates, for Senior Leaders to be successful they are encouraged to establish two crucial norms within their organizations.

The first crucial norm is to create a culture where anyone can speak up and share their concern when it benefits the mission. This is a mantra widely accepted when it comes to safety, but almost vilified when it comes to organizational decisions. Subordinates of today believe that truth and dialogue are the only ways to address the elephants in the room. Modern Soldiers agree that no issue can be solved if you do not talk about it and address it. Authoritarian mindsets are not productive or valued within today's organizations. Bringing up issues and showing these subordinates that their input is valued can encourage their involvement and production. This needs to be an accepted practice, while simultaneously ensuring that good order and discipline are paramount. A common mistake in this realm is that potentially volatile topics are not addressed by leadership, discouraging dialogue and subordinate input. These instances happen far too often in antiquated organizations. Encouraging dialog allows for transparency and promotes

innovation among subordinates. It also allows for Senior Leaders to identify subordinates with the ability to communicate with leadership and contribute to mission success.

The second social norm required to develop today's subordinates is to hold anyone, and everyone accountable. Expectations and performance accountability can go a long way with today's subordinates. If they are witness to Senior Leaders holding everyone accountable for their actions or inactions, the subordinate's willingness to contribute with unrelenting passion is likely.

It may not be a social norm across the force, but leaders within today's digital era need to recognize the value of developing social norms of dialogue and accountability within their organizations. These fundamental approaches appear to thrive in the long term and resonate with the current crop of subordinate Service Members. In the wise words of the late Steve Jobs, "It doesn't make sense to hire smart people and tell them what to do. We hire smart people so they can tell us what to do." It may sound counter-productive, but if accomplished with respect to leadership, and positions of authority, this can inspire the subordinates of tomorrow. Never forget, these slight changes are about embracing the beauty of disciplined initiative within the parameters of mission command.

#### LEADERSHIP IS A COMMITMENT

The Army's definition of leader development is the deliberate, continuous, sequential, and progressive process, founded in Army values, that grows Soldiers and Army Civilians into competent and confident leaders capable of decisive action. Leader development is achieved through the lifelong synthesis of the knowledge, skills, and experiences gained through the training and education opportunities in the institutional, operational, and self-development domains (AR 350-1). Although the Army provides Soldiers fundamental knowledge through Professional Military Education (PME),

Soldiers and their leaders must build upon these fundamentals and provide the experience and advanced knowledge Soldiers need to progress to the next level. Learning never stops, particularly in the Digital Era. As technologies change, so must the way leaders train and

Trust takes time, so it is imperative that leaders begin to build mutual trust with subordinates at first contact. When subordinates have trust in their leadership and they feel like a valued member of the team, they will be more receptive to advice and feedback during the developmental process.

develop their subordinates into adaptive and innovative leaders.

In order to develop Soldiers into leaders, their chain of command and NCO Support channel must resource and encourage self-directed learning. Although Army institutional and operational venues provide leadership training and skills, everyone receives the same leadership training. Organizations can only acquire diversity if leaders take the initiative to develop themselves and address their personal learning goals beyond what the Army mandates. Leaders must challenge subordinates with difficult scenarios to promote learning under stressful situations. It doesn't matter if it doesn't directly pertain to their MOS or daily duties. It is important that Soldiers understand that owning all tasks they are given and never giving up on new learning opportunities as it is very important to their development. This will in turn motivate them to learn new things and seek to fill any learning gaps they have, expanding their knowledge base for when they hold different leadership positions later in their career.

Other important aspects of leader development are building trust in the team and maintaining open lines of communication with subordinates. These aspects often lead to one another. A subordinate should see their leaders more than just during a formal counseling session. Leaders that interact with, coach and mentor their subordinates on a daily basis will be more understanding of their subordinates' needs and portray a genuine interest in them as people. Trust takes time, so it is imperative that leaders begin to build mutual trust with subordinates at first contact. When subordinates have trust in their leadership and they feel like a valued member of the team, they will be more receptive to advice and feedback during the developmental process.

It is imperative that leaders develop a positive culture that promotes learning and development and is built on trust. This environment, along with committed leaders, will enable Soldiers to learn and develop into the leaders the Army needs them to be. Army PME and doctrine can give them the broad stroke of what they need to learn, but not how to do it. NCOs, from the first line leader all the way to the Command Sergeant Major, are charged with developing and promoting and placing the correct personnel in the correct positions to sustain a professional force full of life-long learners.

#### **DEVELOPING TOMORROW'S LEADERS**

In closing, the task of developing tomorrow's leaders in this digital era is no simple task. There has to be a commitment and a cultural shift in leaders to effectively develop future leaders. We must

> promote the lifelong fusion of knowledge, skills, and experiences gained through training and education opportunities in the institutional, operational, and self-development domains. The technically savvy and eager Soldiers in today's Army will require our utmost effort,

and a slight adjustment to our approach of mentorship and guidance. We must embrace the beauty of disciplined initiative within the parameters of mission command.



# Developing NCOs In the Operational Domain

Command Sgt. Maj. Christian A. Adkison, command sergeant major, 782nd Military Intelligence Battalion (Cyber)

# While PME is vital to NCO development, it is in the operational domain where the NCOs build their leadership foundation.

HE ROLE OF NONCOM-MISSIONED OFFICER has not changed much since the formation of the United States Army, but the expectations of the NCOs have increased greatly. Professional Military Education (PME) for enlisted Soldiers is conducted at a higher level than it is ever has before and is focused on developing adaptive and agile leaders. While PME is vital to NCO development, it is in the operational domain where the NCOs build their leadership foundation.

Leader development starts with the example set by NCOs every day. Even

when promoted into the NCO ranks, Soldiers will not automatically become great leaders; they have to want the responsibility. The best way to encourage a Soldier to take

up the mantle of leadership is for NCOs to display the leadership attributes and competencies constantly. They must be the standard-bearers for the unit and the Army, exemplifying professionalism in everything they do. In this digital era, that example extends beyond how an NCO comports themselves on duty. Private lives are no longer private when one uses social media. If an NCO does not live the Army values off duty as well as on, they are not setting the right example for those their Soldiers.

Providing an environment where leaders can make mistakes is an important part of developing leaders. We cannot expect our new NCOs to make the right decisions every time. They will make mistakes, but how we respond to those mistakes is what is important in creating a culture that actually develops leaders. The easy answer is to only address the error and fix it yourself, but that does nothing to keep the NCO from making the same mistake in the future. This is why counseling is so important to an NCO growth. A true leader will sit down and understand why they made the decision, then provide guidance on why it was wrong and what could have been done better. Hold them accountable for what they did, but have a plan to correct the defiance and help them learn from their mistake. This investment serves to better the individual and the overall organization. Colin Powell said, "Effective leaders are made, not born. They learn from trial and error and from experience." Soldiers will not gain the experience necessary to lead in the future if they cannot make mistakes early in their careers. NCOs cannot be so afraid of failure that they fail to act.

As a Senior NCO, one of the most important attributes to possess is humility. We have years of experience with which to provide mentorship and advice, but we must

They will make mistakes, but how we respond to those mistakes is what is important in creating a culture that actually develops leaders. be humble enough to be willing to learn and change as the Army and those we lead evolve. The direct level leaders are closer to age and experience to the junior Soldiers than Senior NCOs. They are in a

better position to understand what motivates Soldiers and how to communicate with them. These direct level leaders, the Sergeants and Staff Sergeants, may do things differently than I did when I was at that same rank, but it does not make it wrong. The arrogance of believing your way is the only correct path leads to micromanaging, which destroys trust and the NCOs self-confidence. Build the foundation that helps NCOs make ethical decisions and ensure they understand the commander's intent, but do not dictate how a task is accomplished.

The response to COVID-19 presented leadership challenges that no one could have predicted. The way our NCOs responded to those challenges is testament to what can be accomplished when those leaders are trusted to accomplish the mission there own way. They have presented numerous innovative solutions to continue training their Soldiers, staying engaged while social distancing, and accomplishing the mission. I have no doubt that the NCOs and Officers of the Cyber Legion will continue to develop agile and adaptive leaders who are ready to meet any challenge.



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## Brigade Soldiers Participate In U.S Army Small Arms Championship

Steven Stover, public affairs officer, 780th Military Intelligence Brigade (Cyber)

# Capt. Joe Lucas, former company commander, inspired the Soldiers to compete.

ORT BENNING, GA. – SOLDIERS FROM E COMPANY, 782nd Military Intelligence Battalion (Cyber), participated in the U.S Army Small Arms Championship (All Army), an advanced combat live-fire training event held by the U.S Army Marksmanship Unit (AMU), March 8 – 14.

During the event Soldiers representing units from U.S. Army Special Forces Command, U.S. Army Forces Command, ROTC Programs, National Guard and Reserve components, competed in various events to include multiple combat rifle and pistol matches.

Overall, the team from Echo Company, Staff Sgt. James Hansen, Sgt. Justin Gershen, Sgt. Rachael Nuttall, all signals intelligence analysts (35N), and Sgt. Matthew Santiago, a cyber operations specialist (17C), improved from their second to last place finish last year, in their first year competing, to place 41st out of 45 teams. Additionally, two team members placed in the top 40 percent of all competitors. Out of 235 competitors in this year's competition, Hansen ranked 142nd and Gershen ranked 150th.

Hansen stated their rakings "may not seem very high, but the level of competition is very high." He then went on to explain how the competition is conducted.

"The number of matches that a competitor has to compete in range from combat pistol matches ranging from 10 to 35 meters in the standing, kneeling and prone positions in various

time

constraints that range from target engagements in 3-15 second strings; to combat rifle matches that ranged from 100 to 500 yards standing, kneeling and prone positions," said Hansen. "All courses of fire are conducted under timed strings of fire. The competition also includes a day of multi-gun matches that allow competitors to engage with both weapon systems against multiple cardboard and steel targets and awarding points based off time to complete each stage and number of hits on targets."

Hansen, the team leader for this year's competition, said it was Capt. Joe Lucas, the former E Company commander, who inspired the company Soldiers to compete at this level.

"The training is excellent," said Hansen. "The ability to compete against all types of shooters, and then bring back those learned skills and techniques from some of the best shooters in the military, will make our formations better."

Gershen said units benefit from the team member's attendance.

"(We are) able to teach soldiers at all levels the shooting techniques learned, which cover both fundamental and advanced techniques for both weapons systems we employ," said Gershen. "Things that we learned include: firing positions, sight picture/alignment, trigger squeeze, breathing and long distance target engagement with an M4 with irons and optics. I will pass these lessons on by teaching Sergeant's Time Training, and being at future ranges, to enable a positive learning environment and provide guidance during live fires."

"Personally, I learned how to create a steady standing position to fire the rifle from, as well as a new technique of how to hold the rifle in the kneeling position so as to have greater control of the weapon and more steadiness while firing," said Nuttall.

"I learned how to calm myself down and how to breathe while shooting. I also learned how to stabilize my kneeling position to have better accuracy," added Santiago. "I will pass on what I know during range days with the company, showing my soldiers the tips and tricks to make them better shooters."

The team's travel was funded by the 780th Military Intelligence Brigade (Cyber), and next year's team will either be led by Gershen, who will attend the Special Forces Assessment and Selection later this year, or Santiago. Nuttall "wishes she could attend next year," but she was recently selected to attend the U.S. Army Drill Sergeant Academy where she will use her "learned skills to train new Soldiers."

For those interested in joining the team, future competitors can contact Gershen or Santiago. Throughout the year they will be developing a base threshold competitors will have to meet in order to be considered for the team.





## All-Army CyberStakes Is More Than Just Army United States Military Academy at West Point

Maj. Lisa Beum, public affairs officer, Army Cyber Institute

All-Army CyberStakes is a 10-day "Capture-the-Flag" style competition that tests individual cybersecurity skills and is open to all civilian and military U.S. government employees.

HE ARMY CYBER INSTITUTE AT West Point hosted its fourth and largest All-Army CyberStakes from April 24-May 3. All-Army CyberStakes is a 10-day "Capture-the-Flag" style competition that tests individual cybersecurity skills and is open to all civilian and military U.S. government employees, as well as cadets and midshipmen from all service academies and ROTC.

"Despite the many challenges of the current COVID-19 environment, we realized that we could still execute a high-quality online training event that would allow members of the cyber

force to train and refine their skills remotely," said Col. Jeffrey Erickson, Army Cyber Institute's chief of staff. "We believe this model will continue to have immense value in the future."

CyberStakes doubled its number of participants from the previous iteration to 2,049 and almost quadrupled the number of solves: 38,663.

Although the competition lasts 10 days in total, participants did not need to dedicate a majority of their time to participate in the competition. It is intended to be accessible to everyone from those with a few minutes a day to cybersecurity professionals who want to measure their skills against others in the community.

"All-Army CyberStakes continues to grow each year with competitors, challenges and quality of training, and we were fortunate this year to expand CyberStakes internationally with participation from the United Kingdom's Ministry of Defence," Erickson said. "The whole purpose of CyberStakes is to challenge and recognize the best in our force, and to provide high quality, deeply technical individual training for all skill levels."

While CyberStakes is a competition, it is also an excellent training opportunity for cyber units and personnel to get hands-on experience solving challenges that directly address core concepts in the field from forensics and exploitation to understanding the underlying vulnerabilities in software.



The length of the competition is deliberately longer than other competitions so that it incorporates two weekends and is readily available to the total Army including the reserve and guard components.

Additionally, the challenges are designed to span the range of skillsets allowing personnel who are not technical experts to participate and learn something new. This year, AACS supported over 115 units, which was five times as many as previous years.

Maj. Roy Ragsdale, research scientist at ACI and an instructor within the Electrical Engineering and Computer Science Department, is the technical director for All-Army CyberStakes 4. His research investigates the use of Capture-the-Flag competitions for training and assessment purposes. Outside of the classroom he has served as the officer-in-charge of the Cadet Competitive Cyber Team (C3T), West Point's hacking team.

"The most significant change this year was a focus on crafting the challenge progression to be more accessible to beginners," said Ragsdale. "This year Capt. John Rollinson, the lead ACI challenge developer, crafted a phenomenal series of 22 introductory challenge which resulted in more competitors solving more

challenges than ever before."

Ragsdale continued to say that the training value goes far beyond

the rote replication of a typical training course and provides competiwith the ability to

t o r s with the ability to deal with technical uncertainty. In order to be successful, they must leverage their existing skills, rapidly learn new concepts and actually put them into practice.

"I'm on the Cadet Competitive Cyber Team (C3T) at school and have developed a love for cyber security and the many competitions that come with it," said Class of 2020 Cadet Aidan McCarthy, a computer science major who placed in the top five in the cadet category. "I saw it as a good way to sum up my time at school and a way to see how I stack up against the rest of the Army." McCarthy branched cyber and hopes to apply what he learned in CyberStakes throughout his career. "Almost every challenge I worked on introduced a new concept I had not explored before or interacted with a service in a new way. Sometimes it can feel like there is way too much to learn, but that's what I love about CTFs and CyberStakes in particular," said McCarthy.

An interesting aspect about CyberStakes is the ability for participants to do writeups after solving a challenge, which permits others who may not have solved a challenge yet to see how to approach the problem.

"Explaining your thought process to someone else helps you understand it better, and gives you notes to reference the next time you encounter a similar problem," McCarthy said.

Out of the 2,049 participants, one hacked his way to the top of All-Army CyberStakes. This year's winner was 1st Lt. Brian Welch, a mission commander and cyberspace capability developer from the 780th Military Intelligence Brigade.

Welch had participated in past CyberStakes competitions and said he was drawn back to compete again by the high quality of the challenges and the friendly competition among other members in his unit. Although CyberStakes was mentally strenuous for him, Welch recognized the value of the competition and how it could help identify those Soldiers with abilities and talents needed within the cyber community.

"CyberStakes is the single greatest technical training event available to the DOD cyber community. Capture-the-Flags, in general, are also a great culminating event for any kind of long pipeline training and give participants an opportunity to compete and showcase their technical skillset," Welch said.

People participating in events like CyberStakes tend to band together, a characteristic that Welch appreciates, especially for those who may find CyberStakes daunting.

"The community surrounding the event, to include the ACI staff and competition participants, are extremely friendly and want you to succeed. You will learn a ton by playing," he said.



1st Lt. Brian Welch, cyber operations officer (17A), 782nd Military Intelligence Battalion (Cyber), was the overall winner and first in the officer category in the Army Cyber Institute (ACI) 2020 All-Army CyberStakes Competition.

"CyberStakes is the single greatest technical training event available to the DoD Cyber community. CTFs in general are also a great culminating event for any kind of long pipeline training and give participants an opportunity to compete and showcase their technical skillset."



Niccoló "Nic" T. Hartley, Cyber Solutions Development Detachment, 780th MI Brigade (Cyber), was first in the Army Civilian category in the ACI 2020 All-Army CyberStakes Competition.

"I would recommend doing other CTFs (like picoCTF, OverTheWire, and HackTheBox), to get used to the format – it can be confusing if it's your first time. Aside from that, go in with an open mind, and be ready to learn. Keep your expectations realistic: AACS isn't designed to be finished. Solving every challenge takes skill and, just as importantly, time that very few people will have, and those few people really aren't the target audience of the CTF. You are. Don't worry about solving everything, and don't worry if it takes you a while to solve things that seem easy for others. Solve what you can, ask for help, and learn to solve a little more.



Chief Warrant Officer 4 Phillip Smith, cyber operations technician (170A), 781st Military Intelligence Battalion (Cyber), was first in the warrant officer category in the ACI 2020 All-Army CyberStakes Competition.

"My strategy is to attack a problem until exhaustion while learning as much as I can along the way. If I fail to solve the problem, I will hunt down a write-up post-CTF and rework the challenge. This will hopefully cement the knowledge."



Sgt. Joseph De Los Santos, cyber operations specialist (17C), 782nd Military Intelligence Battalion (Cyber), was first in the junior enlisted category in the ACI 2020 All-Army CyberStakes Competition.

"To anyone wanting to get into CTFs, do not be intimidated by how well everyone is doing. Tackle each challenge individually and most importantly learn what is going on. With enough determination and hard work, you will get to where you want to be!"



# Why the Army Needs to Use Instructor Lead Distance Learning to Train the Force

Command Sgt. Maj. Timothy M. Hawley, Virginia Army National Guard, command sergeant major for Task Force Echo and the 124th Cyber Protection Battalion

# Instructor lead training is the next step in advancing distance learning. Cyber Center fo ExceleInce has an opportunity to lead the Army.

HE UNITED STATES ARMY HAS continued to lean on self-paced distance learning (DL) to develop and train our most vital assets, our Soldiers. The Cyber Center of Excellence (CY COE) needs to introduce instructor lead DL courses to its Professional Military Education (PME) curriculum. A change to the teaching methods for DL course will benefit Soldiers, Commands, and particularly ever-restrictive budgets. Instructor lead training is the next step in advancing DL.

CY COE has an opportunity to lead the Army in enhancing virtual training while cutting training costs.

The current COVID-19 pandemic forces organizations

to make drastic changes to how they conduct normal business. This holds true for the Army and the rest of the Armed Forces. In March 2020, the Army restricted all official travel, including travel to PME courses. Completing the required PME course is essential for our Soldiers to learn the necessary skills to lead the Soldiers that follow behind them. The Army can obtain the desired outcome by moving from in person PME courses to instructor lead virtual classes or non-resident courses.

The Army uses a distance-learning format for the United States Army Sergeants Major Academy and the Master Leaders Course. However, these courses continue to be a self-taught and self-paced, which I think misses the point of instructor lead training. The benefit is that it allows the Army to train several hundred future and current Sergeants Major and Master Sergeants every year while allowing the student to stay in their current positions, keeping the Army rolling along. The same idea could hold true to our Advanced Leaders Courses (ALC) and our Senior Leaders Courses (SLC). It would allow our Soldiers to stay in their current positions while learning online, but from a live instructor to complete the necessary requirements for graduation.

Classes conducted once a week,

Using a simple virtual meeting room would allow the instructor to conduct face-to-face classes while presenting course work to the student.

> bi-weekly, or even monthly will limit mission impact by allowing Soldier to work a normal schedule with their unit, minus a day for class instruction. The most important aspect is that it still allows an instructor to interact with their student Soldier when presenting course work. Soldiers, in return, would not have to leave families or their units in order to complete the course. It would also allow the Soldier to get support from their NCO support chain if needed. I would have loved to ask my Platoon Sergeant or First Sergeant questions as I worked through ALC or SLC.

> In my opinion, instructor lead DL courses would be longer than current courses. ALC for the Cyber MOSs is approximately 4.6 weeks (averaging the number of weeks for Cyber MOSs 17C, 25B, 35F, and 35Q). According to the

Army Training Requirements and Resource System (ATRRS), the average class size for the Cyber MOSs is 18 Soldiers. U.S. Army Training and Doctrine Command (TRADOC) typically predefines physical class size based on program of instruction. This greatly restricts the number of students in each classroom. DL classes, on the other hand, do not face such physical constraints. By adding more classes or students to each course, Soldiers would be able to complete their required PME well before they need it for promotion. The

> Army would be able to promote Soldiers at the time of selection. Additionally, if courses are longer than they are now, they could focus on all the important things needed for certain grades and

positions instead of having crammed timelines that all PME courses suffer from now.

If the Army used current resources to conduct online training, the cost savings could be huge. The Army has access to approved virtual meeting platforms like Defense Collaboration Services (DCS) already. Using a simple virtual meeting room would allow the instructor to conduct face-to-face classes while presenting course work to the student. Students would also be able to interact with each other when needed, allowing for team building and collaboration exercises. Another option would be to use one of the thousand Colleges or Universities online platforms. Many colleges in the United States have mastered the online class process. If the Army could tap into that resource, it could enhance what we
already have. Obviously, this option would not reduce costs as much as using a platform already in use.

Additionally, cost savings come from the reduction of travel. Using ATRRS and DTS, the average cost to send a National Guard Soldier to school is \$4692. This amount is the average cost for a flight (\$300), lodging (\$700), rental car (\$440), and base pay for E6/ E7. These amounts will differ from one location to another based on location, proximity of the Soldier to the location, and if lodging is provided. Continuing to look at the Cyber MOSs for the ALC and SLC courses, the average class size is 18 students at four classes per year. From a strictly National Guard point of view, 18 Soldiers four times a year cost the Army \$337,824 per year. An often-overlooked cost savings is the number of hours Soldiers are away from their units while attending school. Travel costs and Soldier-hours significantly affect unit budgets across the force; thus by reducing budgets, the Army can redirect funds to other critical priorities.

In closing, the Army will train more Soldiers with instructor lead DL PME while reducing travel costs. Units would be able to keep their Soldiers instead of losing them for several weeks. Soldiers would still get excellent training from their assigned COE while still home with their families and engaged with their units. The Army will ensure training is available for Soldiers as soon as unit leaders believe the Soldier is ready, allowing faster promotion for Soldiers. CY COE has an opportunity to lead the Army with advancing PME for the future by implementing some of these ideas going forward.



## Communicating Why to Z

1st Sgt. Stan Collins, first sergeant, Headquarters & Headquarters Company, 780th Military Intelligence Brigade (Cyber)

The best position to be in to make positive change is in a leadership position. If we are to develop the next generation of leaders we must be able to tell them, in their terms, why we became leaders and what it means to us.

ENERATION Z IS FULL OF self-sufficient innovators who want to connect with people and make a difference in the world. If that is true, why can't we find young Captains who want to be company commanders and young Sergeants who want to be squad and team leaders? It is easy to say younger Soldiers are selfish, only want to please themselves, and have no real drive to make things better. I don't think those things are true. We do a bad job of demonTeam/Combat Mission Team) success – that is superficial. Here is an overly simplified example. A commander decides that going from three weekly PRT (Physical Readiness Training) formations to twice weekly PRT formations are enough to maintain the standard and makes that policy. With transit time and hygiene that is a solid two hours of the day they have just given back to the teams. Spread that across 50 Soldiers and that is 100 hours more every week of cyber training, analysis, development, or planning!

strating ownership, instilling pride, and ultimately demonstrating why we wanted to be leaders; why a commander's decisions have meaning; why they should be proud to be in front of an



We tend to focus on what is going wrong and who is to blame. If we split the focus to what is gone right and EVERYONE who is responsible, wouldn't we all feel better? It is not that bad deeds should go

organization; and why we feel the way we do about leadership.

### OWNERSHIP

Ownership isn't just understanding your role in when something bad happens, it is also an acknowledgment when you had a hand in the good. It is impossible to encourage innovation, self-sufficiency, and positive development when you only expect people to own up to the bad and never give them kudos for the good. If a commander is responsible for everything in their company, why don't we show that by giving kudos when something great happens on the teams? Command Teams and first line leaders drive the training, policy, and the people that make operations happen. They enable mission commanders, operators, and exploitation analysts to get cyber operations done. Leaders give our team leads, analysts, and planners the time they need to focus on the mission. Yet when the team does well, they go unrecognized, and when something goes wrong they are the first call.

While it may seem that a company command team doesn't have much to do with Cyber NMT/CMT (National Mission

unpunished. It is that recognition needs to be given at every level so we know how success happens and where it comes from. The junior leader level is often forgotten and it shouldn't be. Why would anyone want to own something that only causes heartache, pain, and frustration? Leaders can expect a thankless job, but shouldn't have to endure one. Demonstrating through deed and word that leadership had an impact has to happen for people to truly own their leadership roles.

### Pride

Success, however small, is a fantastic motivator. Generation Z is supposedly motivated by instant gratification and praise based on the last cool thing they accomplish. Think "likes" on social media. This is how they know what they did matters. It indicates what actions are valued and which are not. In essence, what they can be proud of. We consistently demonstrate that technical ability is valued above all else in our organization. What does that say about how much pride we put in our leaders?

As much as failure can happen at any level, success has to

happen at every level to get the mission accomplished. Nearly everything we do requires the coordination of people and activities at multiple levels across time and space. A lot of that coordination is placed at the feet of a company, platoon, and squad leadership. These leaders ensure the teams have the personnel they need by number, type, and qualification. They ensure disciplined, motivated, and capable Soldiers. And for all that trouble, we tell a company commander that they are in the top 49 percent of all the other captains. We put "Squad Leader", "Platoon Sergeant" or "Team NCOIC" in the Areas of Special Emphasis and treat

it as a burden that takes the Soldiers away from their "real job." There are lots of MSMs (Meritorious Service Medal) submitted for IONs (Interactive On-Net), but I have never seen one for a Platoon Sergeant.

Recognizing leaders above others sets the example that our unit takes pride in leadership and that we are proud of leaders' achievements. It shows people that the sacrifices leaders make have meaning beyond a paycheck, a parking spot, or an office. It is more than words on a page or a check in a block. If we make being a leader something to be proud of people will be proud to be a leader.

#### WHY WE ARE LEADERS

Most people want to make a difference. This seems to be especially true of our next

generation of leaders. The best position to be in to make positive change is in a leadership position. If we are to develop the next generation of leaders, we must be able to tell them, in their terms, why we became leaders and what it means to us. We have to develop an emotional connection between the individual and the profession of arms to truly inspire people to want to lead.

I believe the true reward of leadership is the connection a leader has with their people, the satisfaction derived from their achievements, and ultimately knowing that you played a part in their success. I can be a positive change in a mission, a unit, or

a Soldier's life. As a leader, I can be a bigger part of something greater than myself. I see it as my job to make sure that everyone knows I feel this way.

When was the last time your chest felt full of pride to be a Soldier? When was the last time you could feel yourself tear up thinking about how great our Army is and what is it capable of? When was the last time you saw a Soldier doing well, applauded them for it, and felt something that connected you to them? Did you tell anyone you felt this way? If you don't remember, you are doing it wrong.

Be emotionally connected to your role as a leader and your people. Believe in what we are doing and communicate that in a real way and others will see that and emulate it. It will give them something to fight for. It will show them that being a leader is a worthy sacrifice. Showing people that being a leader makes a difference encourages younger Soldiers to want the same thing. There is no better way to encourage future leaders than to be honest about why we are leaders now.

While we may struggle now to find willing leaders in our youngest Soldiers, we don't have to. Showing them the positive sides of leadership will help them see the effect a leader has, the positive change they can make, and to truly realize their potential in the Army. Ultimately, we want better for the next generation. We have to



give more if we want that to happen.



Army Developer ==
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## Become a Certified Tool Developer

Wanted: enlisted Soldiers and Warrant Officers to become certified Tool Developers. Tool Developers scrum in five and six-person teams solving complex reverse engineering, and software engineering problems to create or advance offensive and defensive cyberspace capabilities. Customer requirements can entail anything and everything in computer science concepts, and use of programming languages to develop software, reverse software, manipulate software and hardware, automate tasks and workflow, or analyze data.

Do you think about the mechanical workings of your automobile's engine? Do you think of new forms for LEGO blocks? Do you get lost researching how a tool operates to manipulate or improve its function? Do you contribute to projects of which you are not the 'owner'? Do you think about coding when you don't have to think about coding? Do you yearn for a work environment that values continual learning, and the importance of failure?

Tool Developer Qualification Course (TDQC) is the equivalent of a four-year computer science degree program, presented by fire hose method, in eleven months, taught at University of Maryland Baltimore County Training Center.

After submitting a \*request, candidates will receive an invitation from Cyber Solutions Detachment-Maryland to complete a two-hour assessment (date to be determined) that will weigh technical aptitude, passion for the trade, character traits, and programming potential. Certified Army Tool Developers assess the results and build an \*\*Order of Merit List as a recommendation to the 780th MI BDE Commander for future TDQC students.

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Those selected by the brigade commander will enter TDQC to learn and apply C, C++ and Python; data structures and algorithms; network programming, operating system fundamentals, and scrum/ agile methodology. Monday through Wednesday is fire hose learning time in class, then apply those concepts as code to resolve problems presented in the form of customer requirements within a no-excuses, seventytwo-hour deadline.

Upon graduation of TDQ, developer candidates have up to six months of on the job training beforecomplete the basic Army developer joint qualification requirements, and pass the basic skill level examination to become a certified army basic developer.

### WISHING WON'T GET YOU THERE PREPARE FOR TDQC ASSESSMENT

- Register for an account at https://aquinas.dev and complete all exercises.
- Read 57 Exercises for Programmers; Hacking: The Art of Exploitation; Violent Python; C, The Programming Language.
- Create a Gitlab or Github account to post/share projects, code, and work.

\*780th MI BDE (Cyber) will publish an order describing TDQC assessment request, assessment time frame, and class start dates.

\*\*Acceptance to TDQC requires an eleven month absence, without replacement, from current unit. If you are serious about, or even thinking about TDQC assessment, speak with your supervisor and chain of command now.



### **Technically and Tactically Proficient**

1st Sgt. Robert Eberhardt, A Company, and 1st Sgt. Jack Hansen, C Company, 781st Military Intelligence Battalion (Cyber)

You must use your technical abilities to train the Soldier next to you on how to do your duties, so when you move up or out, they can replace you, and the "Army goes rolling along."

HE ARMY DEFINES LEAD-ERSHIP AS "The process of influencing people by providing purpose, direction, and motivation (FM 6-22)." In such a highly technical field, how can one lead without an understanding of the technical fundamentals of their Soldiers and Civilians career field to train and develop leaders?

Noncommissioned Officers are the principal trainer for the individual, crew, and small teams training so, train them! If you cannot remember the last time

you trained anyone on something, you need to self-reflect. Do not rely on institutional training as your primary training resource. You must use your technical abilities to train the Soldier

next to you on how to do your duties, so when you move up or out, they can replace you, and the "Army goes rolling along." Always use every available minute of unallocated time to train. There is time to rest, but there is also always time to train.

To be technically proficient, you must know the unique technical aspects of your career field, and Cyber, unlike others, is in constant change requiring a unique type of dedication not typical in the Army. Many duties in the Army need repeated muscle movements to maintain and sustain their technical knowledge. But the technological world is constantly changing and never stagnant, requiring our soldiers not to be reliant on Training Manuals. The Soldiers are passionate about their technical knowledge and are continually researching and practicing their professional skills to maintain proficiency.

Just like we must remain technically proficient, we must also remain tactically proficient. Sometimes we forget that while our current mission set does not require large portions of our force to deploy and engage directly with the adversary; that may not always be the case. Maintaining our tactical abilities is especially true for our non-cyber Soldiers, as they will leave this unit and may be required to perform tactical tasks at their next assignment. You

Sometimes we forget that while our current mission set does not require large portions of our force to deploy and engage directly with the adversary, that may not always be the case.

> must sustain your basic Army Warrior tasks so you will remain knowledgeable. Those tasks will save your life or your battle buddies' lives. That is why we must sustain our tactical proficiency and take those infrequent training opportunities we have to conduct those tasks seriously and build training events that are relevant, fun, and informative.

> Don't be afraid to go out into the woods and feel that beautiful sunshine on your face while conducting these tasks. As First Sergeants, we always ensure that the tasks that we are training from SMCT 21-1 are not indoors and are relevant to our Commander's Training Guidance. We also can't forget to have fun with it too. Every training event that I remember from my early days in the Army was fun and had

me doing something that I haven't done before. Sometimes you are going to come across those Soldiers that don't like going out into the sunshine, and that is your leadership challenge. Get them out, get them to enjoy training, and when they are leaders, they will do the same thing for their Soldiers.

Combining technical and tactical skills is a formula for an exceptional leader in the Army. A leader with a superior understanding of both skills can use their excellent knowledge of their environ-

> ment to lead others to success using the Commander's vision and shared understanding of the Commander's intent in unique and agile ways, unlike one that only cares about their technical role or their tactical role. We must not forget that in The Creed

of the Noncommissioned Officer, it states, "That I will remain technically and tactically proficient.".

FORT GORDON, Ga. – B Company, 782nd Military Intelligence Battalion (Cyber) Change of Command whereby Capt. K. Lee Shelton relinquished his command to 1st Lt. Alexis Harper in a ceremony hosted by Lt. Col. Wayne Sanders, at Freedom Park, May 8.

FORT GEORGE G. MEADE, Md. – The Soldiers and Civilians of the 780th Military Intelligence Brigade (Cyber) bid a fond farewell to Chief Warrant Officer 4 Kirk Bond and Chief Warrant Officer 4 Troy Ward, who have been a vital part of the brigade's mission accomplishment and overall success. We wish them and their Families all the best – It's never goodbye, only until we meet again.

> FORT GEORGE G. MEADE, Md. – The Soldiers and Civilians of the 780th Military Intelligence Brigade (Cyber) bid a fond farewell to Chief Warrant Officer 4 Kirk Bond and Chief Warrant Officer 4 Troy Ward, who have been a vital part of the brigade's mission accomplishment and overall success. We wish them and their Families all the best – It's never goodbye, only until we meet again.

FORT GEORGE G. MEADE, Md. – Master Sgt. David Herrera, 780th Military Intelligence Brigade (Cyber), was promoted to master sergeant at a ceremony (practicing social distancing and safety) in front of the brigade headquarters on May 5.

FORT GEORGE G. MEADE, Md. – Spc. Andrew Rader, 780th Military Intelligence Brigade (Cyber) was promoted to specialist by Staff Sgt. Alex Jester at a ceremony (practicing social distancing and safety) in the brigade annex on May 1.



FORT GEORGE G. MEADE, Md. – Soldiers and Civilians of the 780th Military Intelligence Brigade (Cyber) bid a fond farewell to Bernard Porter, Brigade S-6, who selflessly served in the brigade for more than 9 years. FORT GEORGE G. MEADE, Md. – Staff Sgt. Joana Palomares, 780th Military Intelligence Brigade (Cyber), was promoted to staff sergeant in a ceremony attended by her fellow Soldiers, Family and friends in front of the brigade headquarters June 5.

> FORT GEORGE G. MEADE, Md. – Staff Sgt. Alyssa Hutchison, Brigade S-1 (Personnel) section, 780th Military Intelligence Brigade (Cyber), reenlisted in the brigade headquarters annex on May 6. The reenlistment officer is Major Matt Sebastian and the event was attended by her fellow Soldiers, Army Civilians and friends.

FORT GEORGE G. MEADE, Md. – Sgt. Steven Silbert, 780th Military Intelligence Brigade (Cyber) was promoted to sergeant at a ceremony (practicing social distancing and safety) in the brigade annex on May 1.





## **Design Matters**

Master Sgt. Cory MacNeil, 780th Military Intelligence Brigade (Cyber)

ESIGN MATTERS. WHETHER NAVIGAT-ING AN unfamiliar airport between flights, using a remote control to switch between Netflix and Play Station, locating one book among 53,783 at the public library, or multiplying VII by XII, design matters.

One design consideration for The BYTE is typography, the art of arranging type. For titles, subtitles, bylines, captions, and all writing which is not body copy, our choice is Helvetica Neue, and its six variations: ultralight, thin, light, regular, medium, bold. This crisp sanserif font is fast to read, and makes companionable contrast with Garamond, the font for all body copy in The BYTE. Garamond pleases the eye for long duration reading. The X height is 2/3 the cap height; loops and bowls rest gently on or hang gracefully from the baseline; ascenders, descenders, and tails proportion from the glyph stem; ears and terminals show their own quirks, though across the set a consistency emerges. We followed a long-standing magazine standard of 10pt size, 12pt leading; 12pt leading matching the baseline grid across columns, pages, spreads for horizontal consistency from start to end of the periodical. The tightness of tracking and kerning natural to Garamond prevents rivers with full justified alignment, though

this is assisted by a few special settings for letter spacing, word spacing, and glyph scaling; also, optical margin alignment enabled. A typical one-page article in The BYTE can now contain 600 words; a two-page article can contain 1,570 words. These design choices are part of making an elegant, confident magazine.

Several years ago, I spent an evening watching America's Got Talent with my spouse, and in addition to having fun doing something she wanted to do, I learned an unexpected lesson about design. A pair of dancers made it through the antics and follies of the initial talent cut for their unusual and creative schtick. When this dancing partnership made it on stage and on camera in front of millions of Americans, their dance moves came with a special effect-glistening curves, light filled arcs, rising and falling coils around each, and the pair. They were dancing in three inches of water. With the ambient lights turned low and powerful backlighting aimed parallel to the stage floor, their steps, shuffles, kicks, prances, sweeps, jumps, leaps dropped the jaws of the four judges, and many millions of Americans. But this dancing couple never made it past the second round. In the first appearance on stage, the special effect drew everyone in. But on second appearance, the judges and audience were no longer wowed by three inches of water. The effect was creative-out of the ordinary, indeed-but the dancing, though it would have pleased at a community talent show, were moves that serious high school dance students had performed on stage.

Anyone who has written a paper in APA, MLA, or Chicago style probably noticed a design feature of each—they are all



boring. But they are boring on purpose. No college student has ever had to question which of all fonts best communicates the importance of cargo shipping to the American revolution of 1776. No college professor has ever had to wonder what nonsense system for a bibliography the student of the next paper to grade devised. Every paper is written in the assigned style, and all paper writing styles are boring—on purpose. Papers that make it all the way through the peer review process for publishing in *Science*, *Nature, The New England Journal of Medicine*, get grade A treatment for publication in print. Until then, the paper must stand on its own. The research must be excellent; the writing must be superior.

In a town hall with the troops, I was present when a brigade commander explained his personal policy on receiving ideas from brigade members: write it in a paper. The tradeoff for being in a position of authority to make things happen—spending tax payer dollars, making policy changes, assigning personnel, directing mission focus—are the numbers of people who want to co-opt the authority to make their things happen. Between meetings, and in meetings, and after meetings, members of the brigade would jockey for two minutes of attention, which became two minutes to pitch an idea, hoping the commander would approve, or better, take up the idea and see it through using the brigade commander authority. Constantly swamped with 'good ideas,' this commander set up a low barrier for entry into his thought process: write it in a paper.

The behest to write it in a paper had two consequences. First, a lot of the 'good ideas' never appeared in paper form. Apparently, the low bar to entry—just write it down coherently was enough to winnow the wheat of true believers from the chaff of light-weight ideas. Second, on the rare occasion when a brigade member presented an idea in written form, this thoughtful commander could choose a time to give full attention to the writing. If the idea was worth the paper it was printed on, the commander could pass it to the Command Sgt. Maj. along with the question, do we have the personnel for this? The commander could pass it to his senior Warrant Officer with the question, is this technically feasible? The commander could leave a copy on the staff judge advocate's desk with a sticky note—get me to yes.

We work hard to give The BYTE the best visual presentation, but Garamond typeface will be little more than three inches of water with backlighting without well researched, well written articles. The brigade commander reads The BYTE. The brigade Command Sgt. Maj. reads The BYTE. The brigade senior Warrant Officer reads The BYTE. The brigade senior Civilian reads The BYTE. The BYTE in printed form goes out to Fort Meade, Fort Gordon, Schofield Barracks, Joint Base San Antionio; also, Cyber Center of Excellence, Intelligence and Security Command, and Army Cyber.

Dear reader, I am skipping all protocol, custom, and courtesy and going straight to the coup de grâce. I triple-dog-dare you to quit your water-cooler chit-chat, and write your idea in a 600 to 1,570 word paper for publication in The BYTE. Next quarter's theme is recognizing issues and reccommending solutions. EXT QUARTER'S BYTE THEME is "Recognizing issues and, reccommending solutions". If you have an idea worth sharing across the 780th MI Brigade (Cyber), write a thesis paragraph and send to Steven Stover at steven.p.stover.civ@mail.mil NLT Aug. 1, 2020. Articles are due NLT Sep. 1, 2020.