

## Just hanging out

A1C Rudolph Laumbach and SrA Seth Gulbranson, 205th Engineering Installation Squadron radio frequency transmission system technicians, practice rescue operations from a tower during annual training at Will Rogers Air National Guard Base, OK. Members of the 205th EIS and 137th Special Operations Communications Squadron partnered for their annual training to certify 15 members in tower climbing, rappelling and rescue operations. (ANG photo by TSgt Brigette Waltermire)



## **INSIDE THIS ISSUE**

Perspective: Retired Lt Gen William "Bill" Lord on the brief history (2008-2010) and politics of AF Cyber Command, the reason for its demise, and what the AF cyber community lost AF Flight Inspection history: In April 1952, Air Force Regulation 2G-51A formally recognized the flight inspection mission as a necessary function of AACS.





# **Communications history**

Air-to-Ground Wireless Communications

1910

First Air-to-Ground, Ground-to-Air Radio Communications

1917

Tabulating Operations



**Communications timeline** tiles are displayed in the AF Cyberspace and **Communications Heritage** Center in the atrium of the Lt Gen Harold Grant building at Scott AFB, IL.







## 3 Sept 1934

Lt Col Henry H. Arnold, Capt Harold M. McClelland, and Capt Charles H. Howard met in Washington, D.C., to discuss the need for airways communications. They agreed that a good air communications system should consist of at least four elements which were not present in existing facilities.

November 11

(1) Alerted Point-to-Point-radio stations at air fields would remain continuously aware of planes in flight and would be free from interference by other traffic such as long administrative messages or attention to other duties; (2) Air/Ground and Ground/Airuninterrupted contact insuring emergency attention when needed; (3) Navigational Aid-by means of radio beacons, compasses, and transmission of regular weather information; (4) Traffic Control at airfields for both takeoff and landing. More than four years would elapse before a peace-inclined nation could be sufficiently aroused to grant military aviation resources to develop airways communications essential for effective air power.



#### LIFE MEMBERS ARE ENCOURAGED TO DONATE TO THE ASSOCIATION IF YOU **ARE ABLE!**

Your donations are very much appreciated!! You can now donate using PayPal on the web site.

1977 - 2008**AACS Alumni Association** 2009 - 2020 **AF Communicators & Air Traffic Controllers Association** 2020 -**AF Cyberspace & Air Traffic Control Association** 



Our Facebook site is at https://www.facebook.com/ groups/1949469148519504/ View and sign up! Air Force **Cyberspace &** Air Traffic Control Association (AFCATCA)



www.afcatca.org



## AF Cyberspace and Air Traffic Control Association

All those interested in supporting AF Communicators, Data Automation, Information/Cyber, Space Operations, Air Traffic Controllers, Air Field Managers, Maintenance, Engineering and Installation, Combat Comm, and related support personnel, veteran, active duty, Guard, Reserve, civilian and retired

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# Recruit! Our future depends on you!

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2023 Convention Recap... 80<sup>th</sup> anniversary celebration

The *Communicator* is the official publication of the Air Force Cyberspace and Air Traffic Control Association.

Send photos and stories to Lori Manske, 665 N 11<sup>th</sup> St, Breese IL 62230, manske5@charter.net.

The magazine is published twice a year, June and November. It is also available online at www.afcommatc.org.



## Report

# Passing the torch...



Harry Raduege

## **Outgoing Chairman and CEO**

First, let me express my deepest gratitude to our Board of Directors for selecting me for a new position as AFCATCA Chairman Emeritus and for voting Chad Raduege, Brig Gen (Ret), as our new Chairman and Chief Executive Officer.

I am privileged and honored to be a 30+ year member of AFCATCA and am pleased that the Board has asked Chad to lead AFCATCA into our next 47 years of service, support and camaraderie for our 912-member Association.

Before our newly elected Chairman and CEO offers a few words, let me post some last thoughts for my final report.

The 2023 annual AFCATCA Convention was moved from our normal time frame of September to the month of April this year. This timing marked a very special historic setting at Scott AFB, in part to celebrate the 80<sup>th</sup> anniversary of establishing the Army Airways Communications System Wing in 1943 — a foundational part of our heritage!

As you will see in the pages to follow, it was a very special time of gathering with all our communities' related organizations: the Air Force Cyberspace Capabilities Center (our Host), Air Force Flight Standards Agency, Air Force Cyberspace and Communications Heritage Center (AFCCHC), and the Air Force C4 Agency. Also part of this "Super Convention" was the AFC4A "Spring Update" and Hall of Fame inductions, and tours of the AFCCHC where artifacts and key personalities of our heritage are preserved and proudly displayed. Additionally, our annual AFCATCA awards were presented to active-duty enlisted members selected for the awards of Air Force Cyberspace Operations Senior NCO and NCO Professionals of the Year, Air Traffic Control Enlisted Manager of the Year, ATC Controller of the Year, and our AFCATCA Hall of Honor recipient and induction. Ken and Linda Reiff, with strong assistance from Jay Adsit and Leslie McCormick, performed host responsibilities for this amazing AFCATCA annual convention.

Additionally, at our Saturday evening banquet, we were all treated to an incredible 80<sup>th</sup> Anniversary presentation by Lt Gen (ret) John Fairfield, who served in our highest Air Force positions including last commander of AFCC, Air Force Deputy Chief of Staff for C4, and DCS for Communications and Information (known today as the A6). General Fairfield was also the final recipient of AFCC's Order of the Sword, an honor bestowed by the enlisted members.

For my last paragraph, I want to sincerely thank all of our AFCATCA members and especially our Board of Directors for all that they contribute to our amazing Association. I would need lots more space to properly recognize each individual, but I will let you read their reports that follow and marvel at the amazing results of their efforts — all as volunteers in dedicating their time, resources, and love for this Association and our membership.

Thank you everyone for your magnificent dedication and support! Continue to Aim High!

#### HARRY D. RADUEGE, JR. Chairman, Emeritus





## Chad Raduege Incoming Chairman and CEO

Let me applaud the inspiring leadership of Lt Gen (Ret) Harry Raduege – after all, I'm a proud son – for his service to OUR Association as Chairman and CEO over the last two years. I'm humbled to follow in his footsteps, I am thankful for his continued service as our Chairman Emeritus, and I am committed to do my best to lead AFCATCA into the future.

I've been a proud member of AFCATCA for years now. As such, I'm excited to work with a superbly dedicated and focused AFCATCA Board of Directors to not only maintain our strong community of fellowship, but to build a strong culture for the future.

Our Association was built on the "shoulders of giants." May we remember those that have gone before, honor those of today, and inspire those of

tomorrow. As our name indicates, AFCATCA focuses on our Cyberspace and Air Traffic Control professionals; with today's complex battlefields, these professionals are more relevant than ever! A top priority will be increasing our AFCATCA membership.

Our next AFCATCA convention will be in Dayton, Ohio, from Sept 25-29, 2024. A primary focus will be the magnificent National Museum of the Air Force at Wright-Patterson AFB. I sincerely look forward to seeing and spending some quality time with all of you!

Health, happiness, and God bless,

CHAD D. RADUEGE Chairman and CEO

## Note of gratitude from the Board

"We make a living by what we get, but we make a life by what we give."-Winston Churchill.

General Raduege, thank you for your years of service and dedication to our board of directors and our Association. Your ideas and enthusiasm have been vital to the success of our team and our organization.

We appreciate your wise counsel and friendship over the past few years. As a leader, you recognize that it's less about one strong or charismatic individual, and more about our group of people working together to achieve results. We know the apple doesn't fall far from the tree. We look forward to working with Chad, who undoubtedly is highly motivated and believes in the vision of the organization. Welcome!

Thank you! AFCATCA Board of Directors





# **CHAPLAIN'S CORNER** Moving forward with purpose!

### By Ed Broestl Chaplain

What do you do better than most? What is it you do and time passes quickly when you're doing it? Notes: 1) Sleeping is not an appropriate response to any question! 2) It might be good to have a pen and paper to record your thoughts. Now that you've made a choice, what are your second and

third choices? Take some time – don't rush.

Compare your current choices to those when you were a teenager. Please know racing cars is not an option but working on or getting them ready to race very well could be viable choices.

Attempt to quantify the time or

energy you spent in your choices when you were between 18 and 33? Now do the same for your original choices during the last 15 years.

I know, when you started reading this you were hoping to sit back and enjoy a heart-warming,

## An author in our midst...



**Robert Steele**, a former commander of Air Force Communications Agency (now AF Cyberspace Capabilities Center) at Scott AFB, IL, June 2005 to June 2007, is a published author. You can get a copy of his book on

Amazon.com.Link below. "From the tragic loss of courageous airmen who gave their lives for our freedom to the gentle

breezes that swirl through graves in a quiet cemetery in Belgium's countryside, Bob Steele takes us on a personal journey of history and revelation as he recounts the story of his uncle, a gunner on a World War II bomber, and his own personal quest to uncover the



fates of the crewmen, their families, and gracious Europeans who honored them. Any fan of Eighth Air Force history and the sacrifices made by American airmen in the defeat of the Third Reich will find this story informative, poignant, and well worth the read." (Book description)

https://www.amazon.com/Last-Flight-El-Flako-Nephews/dp/173604561X/ ref=cm cr arp d product top?ie=UTF8 nostalgic story with a moral point. Hang in there...it will soon appear.

When did anyone call out and/or commend you for your abilities? Those, my brother or sister, are known as gifts or talents. We each have them! Occasionally, they wax



and wane based on situations or

Ed Broestl

age. Every human is unique, even identical twins with similar DNA at birth are unique because experiences differentiate us.

Now the point of your story. As you further reflect, how can you

move forward with confidence and compassion? How might you make your life and possibly the lives of those close to you more joyous and fruitful to make a positive impact in a world needing encouragement?

Grace and peace –  $\mathbf{Ed}$ 

# **Missed Roll Call**



Robert A. Sundholm, Jr. 1934-2022 Robert "Bobby" Garcia, 1944-2023 Alan Brenner, 1939-2023 Wendall Houck, 1921-2023 Carolyn McLain, 1942-2023 Carl G. O'Berry, Lt Gen, Ret, 1936-2023 Gene Patterson, 1930-2023



November 2023 Communicator

# Air Force aligns leadership titles with joint force

ARLINGTON, Va. (AFNS) --Effective Aug 1, the Air Force changed duty titles from vice commander to deputy commander to better align terminology with its sister services.

The Air Force issued a memo communicating updated guidance for Air Force Instruction 38-101, Manpower and Organization, redesignating all vice commanders as deputy commanders (CD) so that the same title will be used at major commands, numbered Air Forces, centers, wings, groups, and other units.



This update will standardize the term service-wide.

# Information Operations creates global reach

#### By Capt Dorothy Sherwood 16th Air Force (AFCYBER) JOINT BASE SAN ANTONIO-LACKLAND, TX

Integrated deterrence starts at the lowest level and at 16th Air Force's (AFCYBER) 67th Cyberspace Wing A39, the Information Operations team is making a global impact at their level.

The IO team supports real-world operations, reach back, exercises and operations security.

"We are the only Air Force and Space Force OPSEC Support Team," said Tyrese Stafford, 67th CW, A39 IO chief. "We are the 'operational arm' supporting units worldwide."

As the two services' OST, they are responsible for OPSEC Management Assessments and OPSEC External Assessments traveling around the world assisting organizations to achieve a more effective OPSEC program, while also testing units for vulnerabilities and their ability to mitigate them.

"This past year, our OST has assisted and evaluated over dozens of wings and deltas all over the world from the 100th Air Refueling Wing at RAF Mildenhall, England, to the 31st Fighter Wing at Aviano AB, Italy," said Stafford. "Additionally, the OST conducted a multiyear, Air Force-wide OPSEC External Assessment to understand the Air Force's ability to protect sensitive aircraft deployments."

Once the team identifies any vulnerabilities, they incorporate them into exercises to test the units again and integrate lessons learned.

One such exercise is Air Force Special Operations Command's Emerald Warrior, where the IO team applies these lessons learned from real-world operations to deliver trained and ready joint forces.

From Sept 11-15, 2023, the IO team was leading the white "fusion" cell team that replicated a Theater Special Operations Command J39 and adjacent Joint Task Force along with other Information Warfare forces from space, cyber and public affairs.

The white fusion cell provides realistic and relevant training for personal recovery, humanitarian support and direct action missions to prepare headquarters special operations staff for an evolving strategic environment.

"The team trained the joint force on ISIO, Intelligence Support to Information Operations, making the exercise more information focused," said Stafford. "The force is taught whether to reveal or conceal information depending on the objective and the adversary's physical means."

The ISIO training was first introduced at the 16th annual Emerald Warrior exercise in March 2023, to further synchronize information capabilities across cyber, space and public affairs, and prime AFSOC's Special Operations Task Group (Expeditionary Group) and Special Operations Task Unit (Expeditionary Squadron) commanders when deployed.

For the past three years and four iterations, the IO team has supported Emerald Warrior exercises with exercise design, integration of military information support operations, OPSEC and military deception.

They have provided over 150 years of their combined experience and expertise in IO, which is why their unit trains the Air Force's 14F Information Operations officers.



The 67th Cyberspace Wing A39, Information Operations team, collaborates with intel in the white "fusion" cell during Emerald Warrior at Hurlburt Field, FL. (U.S. Air Force photo by SSgt Caleb Pavao)











### Leslie McCormick Membership & Recruiting

## Membership Report

Total membership as of Sept 1, 2023: **912** Total Life Members as of Sept 1, 2023: **844 MAILING/E-MAIL ADDRESS:** PLEASE SEND ME AN UPDATE IF YOU HAVE RECENTLY MOVED OR CHANGED YOUR E-MAIL! We try to send communications between issues of the *Communicator* and want to reach as many members as possible.

**COMMUNICATOR:** If you have access to the internet, <u>please</u> consider opting out from receiving the *Communicator* by mail. The savings on printing and postage helps our Association. To opt out of mail, please notify me.

Recent Communicators, as well as archived editions, are available on the web site: <u>www.afcatca.org</u>

# Welcome to new members and <u>thank you</u> to renewing members for continuing to support our Association!

#### Update from Feb 1 to Aug 30, 2023:

New Members 🛛 🔏 🕹 👢 🔘	Smeltz, St
Adams, Larry	Taglieri, Jo
Basla, Michael – Life	Thomas II
Bennett, Tabitha - Life	Twilley, Su
Black, Bill	Van Dyke,
Burkhalter, Jacob	Renewals
DeLange, Eric - Life	Corbett, P
English, Michael - Life	Dorsey, Cl
Gravelle, Tim – Life	Doyle, Cla
Karabelski, Adam - Life	Felber, Da
Kim, Alan	Grimmer,
Knuth, Daryl	Kurzenkna
Martinez, Edward – Life	Martinez,
Patterson, Gene	Witt, Bufo
Potucek, John - Life	

Smeltz, Stamatis Taglieri, John - Life Thomas II, Rob – Life Twilley, Susana Van Dyke, Eric <u>Renewals</u> Corbett, Philip Dorsey, Clark Doyle, Claude Felber, David Grimmer, Chris Kurzenknabe, Glenn Martinez, Lisa Witt, Buford (Randy)

If you know others who are eligible, please encourage them to join AND participate in our yearly conventions. Getting together with old friends and coworkers – and meeting new friends – is a wonderful experience! Please contact me and I will send an application to you, or directly to a prospective member. Just think how many members we would have if each person brought in ONE new member this year!



November 2023 Communicator

## Editor

## **Editor's Report**

Cost of the March 2023 <u>Communicator: 32 pages – 900</u> <u>copies</u>

Printing & Binding	\$ 2,189.30
Mail Preparation (900)	\$ 95.30
Postage	\$ 819.79
Total	\$ 3,104.39
AFCATCA.ORG Web Si	te:
1 yr .ORG Domain Renev	wal \$20.99
1 yr Full Domain Privac	У
and Protection - Renew	\$9.99
+ tax	\$31.16
1 yr Ultimate Managed	
WordPress Website Rene	ewal
	\$239.88

	<b>\$</b> 2 <b>39.</b> 00		
Advanced - Renewal	\$239.88		
Total	\$479.76		

### What's your story?

Our older generation is our greatest vanishing resource and we would all be well served to read about your experiences in AFCS/AFCC/AFC4A, etc. Please dust off your scrapbooks, refresh your memory, and send stories/photos about events, people and assignments during your time in service to Lori Manske, 665 N 11th St, Breese IL 62230, or manske5@charter.net.

You can email high resolution photos, or if you mail photos, I will scan and return them promptly.

Send your ideas for things you would like to see in future editions.

The web site is one of our biggest recruiters of new members. Word of mouth and active recruiting efforts often result in new members too. www.afcatca.org





Jim Weber Treasurer

### **Treasurer's Report**

#### As of 1 Sept 2023

Cash i	n ENT Credit Un	ion:
AFCA'	TCA Checking Ac	ct <b>\$6,017.96</b>
Host C	Checking Acct	\$4,624.55
Busine	ess Savings Acct	\$65.17
	Cash Totals:	\$10,707.68
Certifi	cates of Deposit:	
53 - 12	\$5,450.74	Maturity Date 03/31/24
57.11	\$11,123.27	.Maturity Date 06/03/24
58-11	\$22,401.90	.Maturity Date 06/03/24
56-11	\$5,456.56	Maturity Date 06/03/24
54 - 12	\$5,379.74	Maturity Date 03/15/24
CD	) Totals (5):	\$49,812.21
(\$50,00	00 is held in reser	rve for costs that may be
incurre	ed due to the can	cellation of a convention)

Grand Totals: \$60,519.89

My goals are always: (1) Stable growth and (2) Security of Funds. In June 2023, 3 CDs were moved from .370% to a higher interest rate of 5.2%. When the other two mature on March 24 they will be moved to the higher rate.

Higher costs are a way of life now. It is reflected in everything from the hotel rooms to the cost of food and transportation.

I urge all of you to continue to support our Association through donations that have always been a key source of income. Remember, donations to our Association are tax deductible. Donation letters are sent upon request.

Donations should be made to AFCATCA and sent to Jim Weber at 4018 Slice Drive, Colorado Springs, CO 80922.

Donations to date: \$1,500.00.

Looking forward to seeing all of you in Dayton, Ohio.

Note: Sarah Cleveland took over as AFCATCA Treasurer with Mr. Jim Weber to serve as Assistant Treasurer effective Oct 15, 2023. We will introduce her in next edition.





Bill Cassatt PX/BX SALES

### **PX/BX Sales Report**

#### PX / BX Sales Report (Mar - Sep 2023)

	ltems Sold		
Challenge Coins	2		
Plaques	1		
Hats	1		
Golf Shirts	2		
lackets	1		
Total Sales:	\$277.75		

#### **Expenses**

)
5
)

#### **Donations**

<b>Total Donations</b>	\$ 175.00
William Miles	\$ 25.00
Henry Konat	\$ 150.00

#### **Convention Sales Report**

Total Sales:	\$270.00
X Large Golf Shirts	1
Large Golf Shirts	1
Small Golf Shirts	2
Plaques	1
Challenge Coins	1
Hats	2

AIR FORCE CYBERSPACE AND AIR TRAFFIC CONTROL ASSOCIATION



# A look back at AFCC demise brings painful memories



A tip of the hat to historian Dan Williams for the trip down memory lane with his "Providing the reins of command for 80 years!" article in the March 2023 Communicator. As a career air traffic control officer, his comments in regards to the demise of AFCC brought back painful memories.

When AFCC transitioned from major command to field operating agency in 1991 it caused quite a culture shock for thousands of controllers and ATC officers (myself included). Just imagine, your customer became your boss overnight! While ATC personnel continued to operate day-to-day in the same ATC facilities, their entire overhead management and leadership was realigned.

ATC was thrown into newly formed operations support squadrons along with other operationsrelated wing functions like intelligence, current ops, and flight records. Whereas previously the Chief of ATC Operations worked for the comm squadron commander, a comm officer, in the new organization the ATC officer became the airfield operations flight commander working for a rated squadron commander. The new flights included other cats and dogs like airfield management and weather ops. Unfortunately, ATC was separated from its vital maintainers that kept things up and running.

The new operations squadrons were aligned under operations groups at the base level. At MAJCOM headquarters ATC staffs transitioned from under the Communications Directorate to the Director of Operations. A new organization, Air Force Flight Standards Agency, was established, led by a rated colonel, and tasked to oversee the AF ATC business.

After suffering through growing pains, ATC emerged better for it. As German philosopher Friedrich Nietzsche observed, "Out of life's school of war—what doesn't kill me, makes me stronger." *Col Bill Malec, USAF, Ret., O'Fallon, IL* 

# **Blasts from the past** ...

Lt Col (ret) Roland "Rocky" Gannon sent us two old *Communicator* newsletters-one from February 1949 and one from June 1948. They were published monthly for personnel of the Airways and Air Communications Service in the Pacific. Rocky is featured in the 1949



On 26 December, a C-47 airplane, piloted by Col. M. C. Rodgers, Air Advisory Group in Shanghai, China, departed Haneda AFB en route to Itazuke AFB. Approximately forty miles out of Haneda the plane reported en-. gine trouble and was cleared for immediate return to Haneda.

Although the weather conditions were poor -- one hundred foot ceiling and one-half mile visibility in rain and fog -- the plane was brought in for a safe landing by M/Sgt. Gannon, Sgt. Adams and Sgt. Baird of the Haneda GCA team. edition for a GCA "save" (see clipping below left). It was Rocky's fifth "save". Rocky was NCOIC of Haneda GCA from 1947 to March 1949.











# **Compassionate leadership** in action...taking care of the troops

By Bob Chaplin

Through three "Communicator" articles and a superb 80<sup>th</sup> birthday celebration of US Army Air Forces and USAF communications dinner speech, Lt Gen (ret) John Fairfield gave us candid insights as to what it took to "kill a command".

Executing the order was a lot more than just furling the command flag one last time and sending important documents off to the historians for archiving. Mission areas had to be merged into other commands. Resources had to be reallocated. Most importantly, officers, noncommissioned officers, airmen and civilians of Air Force Communications Command (AFCC) had to be reassigned.

General Fairfield did this with great compassion and foresight. He followed his orders to "kill the command," but rather than let it die, he let it be drawn down.

Irreplaceable leaders, assets and skills were spread throughout the Air Force only to be rejoined on a later day. Today we call that rejoining 24<sup>th</sup> Air Force, the Air Force's downgraded version of its provisional Cyber Command.

General Fairfield did this with compassion (taking care of the troops), resulting in him being awarded the last AFCC Order of the Sword.

In January 1993, I had the opportunity to observe General Fairfield's compassionate leadership firsthand. I was the last commander of Air Training Communications Division (ATCD) and 'mission one' was to merge ATCD assets into Air Training Command (ATC). General Fairfield came to visit me that month to provide as needed support and assistance. Just prior to his arrival, a terrible accident occurred on Jan 23, 1993, at NORAD Cheyenne Mountain Air Force Station, CO. An AFCC Engineering and Installation team from McClellan AFB was removing abandoned cables from manholes and cable ducts.

Inadvertently, a young airman, A1C Jon Corklin, came in contact with a live electrical cable instead of an abandoned communications cable. He was severely burned. Airman Corklin was air evacuated to the Brooke Army Medical Center (BAMC) burn unit in San Antonio, TX, for treatment. BAMC is a short distance across town from HQ ATC and Randolph AFB. General Fairfield's visit with me extended into Super Bowl weekend. I invited him to join our Super Bowl party, but he respectfully declined. He stated he was going to watch the Super Bowl with Airman Corklin and help him recover. General Fairfield spent Super Bowl Sunday with Airman Corklin. He filled in being a family surrogate and provided him with a comforting and healing presence. It was true compassionate leadership in action.

Leadership entails many different styles and types. No one kind fits all individuals or situations. Some experts call this Adaptive Leadership. Whatever kind of leadership is employed, if compassion is part of it, it will succeed. Thank you, General Fairfield, for showing us how to employ compassionate leadership.

Editor's Note: Other members of the 1849<sup>th</sup> Engineering Installation Squadron team working with A1C Corklin on Jan 23, 1993 were SSgt Nestor Noble and SrA Gary Miles. Both sustained only minor injuries.



Lt Gen (ret) John Fairfield

#### General Fairfield's Own Words...

"What I remember was the miraculous work that the medical officials at BAMC did for Airman Jon Corklin. BAMC is recognized as the world's premier leader in dealing with burn injuries. I can testify to that well deserved status. The Doctors said he would survive as his lungs were intact. But his challenge was more a mental one as his skin was severely damaged and he was discouraged at how he looked and fearful that he would "never be the same again." To help him deal with this, BAMC had brought in previous burn victims who spoke to our airman showing him their "before and after" results which were remarkable. This gave Airman Corklin and his family great hope.

The BAMC skin grafting specialists are simply artists.

I asked Corklin what he would like to do for the upcoming Super Bowl XXVII. He told me he would love to eat pizza and watch the Cowboys play the Bills. So I turned down Col Chaplin's gracious invitation for an "away from home" meal. I bought a pizza and pulverized it in a blender and slowly fed it with an eyedropper as he watched Dallas crush Buffalo 52-17.

Corklin later went on to a full recovery thanks to the approach that the BAMC doctors took to understanding both the medical and mental arts to healing. I was grateful to lend a small hand to a fellow airman-something any teammate would have done.'



## PERSPECTIVE

#### By Lt Gen William T. Lord

# Air Force Cyber Command (P What happened?

Lt Gen William T. Lord (USAF Ret) served as the Chief of Warfighting Integration and Chief Information Officer, Office of

the Secretary of the Air Force, Pentagon, Washington, D.C. until his retirement Aug 1, 2012. He led five directorates and supported <u>30,000 cyber</u>

operations and support personnel across the globe with a portfolio valued at \$17 billion. He integrated Air Force warfighting and mission support capabilities by networking space, air and terrestrial assets. Additionally, he shaped doctrine, strategy, and policy for all communications and information activities.

The general held various duties with tours in Europe, U.S. Central Command and the White House. He commanded at the detachment, squadron, group, wing, major command and joint levels.

Before his final assignment, General Lord was to be first commander of Air Force Cyberspace Command (Provisional), Barksdale AFB, La.

#### The Mission

"Bill, I'd like you to stand up a Major Command to focus our Air Force on the cyber mission. We'll call it Air Force Cyber Command; OK with you?" That was

OK with you?" That was Secretary of the Air Force Mike Wynne's question to me. Of course, the answer was "Yes, Sir!" As the first (and only) commander of AF Cyber Command (Provisional), I'd like to provide a perspective on the brief history (2008-2010) and politics of that command, the reason for its demise, and my opinion of what the AF cyber community lost because of stopping the effort.

#### The Credit

First, I must give credit to the giants upon whose shoulders I stood as I began the task the SecAF gave me: Gen Michael Hayden for his NSA and CIA experiences; Lt Gen John Fairfield (the last AFCC commander) who provided boundless organizational enthusiasm: Lt Gen Bill Donahue and Lt Gen Harry Raduege, who provided wonderful technological advice; Maj Gen Dale Meyerrose and Dr. Lani Kass, who created the operational constructs still in use today, and Maj Gen George Lampe and Mr. Robert Jack, who always had great military and civilian personnel inputs. These leaders taught me many of the lessons the new AFCYBER(P) would use.

Thanks also to all the folks assigned to AFCYBER(P) who did the "heavy lifting" with a special thanks to then-Lt Col Mike Convertino and Col (ret) Wally Wachdorf.

#### The Facts

As we embarked on the standup, the Secretary of the Air Force also told me to, 'get this out of Washington, DC'. By the very nature of the command, it was thought it could be 'virtual', that is, not needing all the normal MAJCOM staff or the basing associated with that staff. SAF/IE (Engineering and Installations) ran the process of 'where' the new command would be established.

During that time, I had 40 members of Congress tell me exactly where that location should be...in 40 different states! Barksdale AFB, La. was only an interim/initial location but selected because of the close association of the CSAF and SecAF with the 8<sup>th</sup> AF/CC, Lt Gen Bob Elder. Bob was an early big thinker in the AF cyber world. Eventually, SAF/IE selected the San Antonio area.

Upon activation, our tiny staff at Barksdale AFB immediately began working the Programming Plan required for an AFCYBER Command (Major Air Command – MAJCOM) stand-up. We looked at everything from strategic plans to unit flags, from organizational structure and manning to budgets, from new officer and enlisted career specialties to new badges. We examined how to include Combat Comm, Engineering and Installation, Electronic Warfare, and Information Warfare. We refined the definitions of cyber, info warfare, info-in-warfare, info ops, etc. The staff had the constant question of whether cyber was a 'place' or a 'mission' – much like the early days of Space Command.





There were lots of thorny issues. As the newest, and youngest, MAJCOM Commander, I was honored to be included in the triannual CORONA conferences run by the SecAF and CSAF with all USAF 4-star generals.

I thought we needed an early win-something to

show the leadership that this whole thing was worth the investment the AF was making. That is, a realworld cyber operation which could demonstrate the ability of a non-kinetic weapon (cyber) to create a kinetic effect (smoke on the battlefield). While I can't reveal the details of that operation used in a combatant command's area of responsibility, I can tell you the result of the update I provided at CORONA was

... vulnerabilities in ground systems highlight the extent to which space and cyber warfare are interconnected (a key lesson he has drawn from the Russian-Ukraine war). "Cyberspace is the underbelly of our global space networks."

#### Chief of Space Operations Gen. B. Chance Saltzman

jaw-dropping to the other MAJCOM commanders. Most, but not all, became new supporters of the stand-up of this new MAJCOM. I also wanted them to know what we (AFCYBER) were going to do – for them – in the cyber arena with enterprise-wide information technology solutions, so they didn't have to provide IT services.

Then, the bad news! An unauthorized movement of nuclear weapons between two AF bases occurred. A sharp Security Forces airman on the flight line at Barksdale saw the active weapons on a parked aircraft...and he knew something was wrong. The

result of that was the Secretary of Defense, Mr Gates, removed both the SecAF and CSAF from their jobs. The new leadership was directed to refocus attention on the nuclear mission area, and as such, they felt the formation of AF Global Strike Command (at Barksdale AFB) was the best way to do that. The missile mission was also moved from AF Space Command to Global Strike Command at that time. The slowdown of AFCYBER(P) work began ignominiously.

Command to Global Strike Command at that time. The slowdown of AFCYBER(P) work began ignominiously. A Cyber MAJCOM stand-up was no longer required by the new SecAF and the new CSAF. And so, the resources began to be divided. The manpower, budget, etc. was moved to AFGSC and AF Space Command. The reduced cyber efforts were moved to the AF Space Command staff where they worked to establish a Numbered Air Force...with many of the functions still seen today...a warfighting organization first proposed and started by the new AFCYBER(P).

#### The Personal Perspective

It is my belief that SecAF Wynne was the original, true champion and prescient leader behind the AF nascent cyber capabilities. He saw what the future could be with the integration of air and space and cyber. We lost a valued champion when he was dismissed. It is my belief that we could have, and should have, stood up both new MAJCOMs simultaneously. We really can do two things at the same time!

The loss of the AFCYBER Command continues to perturb the loss of singular focus on this mission

area. As evidence, just look at the number of MAJCOMs and NAFs
where the cyber mission has been bounced between in the last decade. I don't believe I'm merely pining for the 'good ole days of AFCC'...but there was value in the focus a MAJCOM brought to this mission area.

> As recently reported in Air & Space Forces magazine, Chief of Space Operations Gen. B.

Chance Saltzman said vulnerabilities in ground systems highlight the extent to which space and cyber warfare are interconnected – a key lesson he has drawn from the Russian-Ukraine war. "Cyberspace is the underbelly of our global space networks." I think there's a 'lesson to teach' for all! At an Air & Space Conference recently, it was stated that the AF is "behind" in upgrading its electronic warfare capabilities. At the time, ACC didn't want to move that mission to AFCYBER...even though it was ranked #435 on their unfunded list.

#### The Way Ahead

Finally, there are still many of the new operational constructs in place from AFCYBER(P) initiatives begun over a decade ago. The first Cyber Patriot games had only eight Shreveport, La. area high schools. This year more than 5,000 participated, thanks to the Air & Space Forces Association effort led by Brig Gen (ret) Bernie Skoch. So, some good was created and endures from AFCYBER(P) work.

However, the time has come to rapidly modernize and field technologies that establish our ability

to dominate in the cyber domain. The Air Force may have squandered its edge since the AFCC days, because it undervalued cyber power. But there may be hope. Dr Wanda Jones-Heath, the current SecAF's Principal Cyber Advisor, told Defense Scoop that Secretary Kendall "quickly recognized that we [AF] had a huge problem: cyber was not valued from a warfighter perspective...and he truly understands that cyber and cyber security are part of the success that we'll be able to achieve."

That recognition is good news. Secretary Wynne's vision of a MAJCOM dedicated to the cyber mission was the right one, and the value that could have brought for today's AF would be much bigger and better...but that's just my opinion!



## Attempted Iran Hostage Rescue Mission

### AFCC C3 and ATC received praise

#### By Van C. Doubleday Maj Gen, USAF Ret

There are numerous stories of successful Command, Control and Communications (C3) and Air Traffic Control (ATC) operations during critical military operations throughout history, but none more compelling than what the C3 and ATC professionals of the Air Force Communications Command



delivered before, during and after the U.S. attempted hostage rescue mission in Iran on April 24, 1980. Overall, **Operation Eagle Claw** took place from Nov 4, 1979 through Jan 20, 1981.

Even though the attempted hostage rescue mission took place 43 years ago, I remember it well since I was performing duty as the Deputy Director for Strategic C3 Systems for the Joint Chiefs of Staff at the Pentagon.

As a reminder, the government of Iran forcefully took over the American Embassy in the capital in Tehran, a city of 8 million people, and held our embassy staff of 53 Americans captive in the Department of Foreign Affairs.

Our government's reaction was immediate, and a formal demand was made for the release of our U.S. team who were held as prisoners, along with the



Maj Gen Van Doubleday



Brig Gen (later Maj Gen) John Paul Hyde

abandonment of all U.S. embassy property. The Iranian government's response was negative and after receiving no indication of a positive response to U.S. overtures, the U.S. President ordered his National Security Adviser to develop a rescue plan with the Chairman, Joint Chiefs of Staff).

This top-secret plan envisioned a Joint Task Force (JTF) to sneak into Iran and forcefully rescue the 53 American captives and return them to U.S. soil. The plan was developed while diplomatic efforts continued with no significant progress. I worked directly with Brig Gen John Paul Hyde (later Maj Gen), who served as both the Commander of the Tactical Communications Area (AFCC) and Deputy Chief of Staff for Communications and Electronics, Tactical Air Command at Langley AFB, VA. General Hyde, in turn, assembled a small group of combat communicators and began planning for C3 and ATC support

to connect all participants from the White House to end destinations within Iran. At that time, the U.S. military had limited satellite communications assets, so we had to rely on traditional microwave, tropospheric scatter, radio, ATC, and other forms of tactical gear to connect U.S. military forces on the ground, at sea, and in the air. Ultimately, this plan was developed, fully reviewed, and later approved by the President who stipulated that the plan pose minimal threat to the Iranian population and had to demonstrate to the world that our only purpose in conducting this military action was to rescue U.S. diplomats and citizens from being held as hostages and to safely return them to the U.S.

The plan called for a Delta Force of 80 members to be flown from the aircraft carrier Nimitz, operating in the Sea of Oman, by using very large RA-53 Sea Stallion helicopters. These helicopters would fly Delta into Tehran and bring them back out with the 53 prisoners.

The first step was to fly the helicopters from the Nimitz to a remote location named Desert 1. There they would rendezvous with C-130 aircraft carrying full bladders for refueling at Desert 1. From there, the plan called for the Sea Stallions and Delta Force to fly to a secret area near Tehran and remain overnight. The following day, Delta would free the 53 hostages from the Iranian prison and relocate them to a nearby soccer stadium where they would be loaded on the helicopters and flown out of Iran with an additional refueling en route. The hostages would be taken to an airfield on the northern tip of Masireh Island, where any injured individuals could be treated before flying on C-141 aircraft to the Landstuhl, Germany hospital.

There was considerable optimism among those on the JTF that this complicated, dangerous top-secret mission could be successful executed, if all involved forces stayed on plan. Similarly, C3 and ATC procedures had been developed and equipment readied over the 4 months of top-secret planning by the AFCC professionals, so there was great confidence that command and control of the entire operation would be effective.

The initial stages of the plan consisted of launching the helicopters from the Nimitz and C-130s from Masireh, all headed for Desert 1. All were on time until the helicopters flew into enormous sandstorms which were not forecast. Visibility forced two Sea Stallions to land, with another aborting and returning to the Nimitz. The mission now only had 7 helicopters that made it to the Desert 1 location.

When the 7 helicopters arrived at Desert 1, the onsite commander advised the JTF Commander of being one short of the minimum number of helicopters required by the plan, along with another one developing an unrepairable hydraulic leak. Now, only 6 helicopters were mission-ready. This was relayed to the Joint Chiefs of Staff and a decision was needed in 15 minutes to abort or proceed. The recommendation came back in 3 minutes and the situation was relayed by the JTF Commander and on to the White House.





The President wanted the opinion of the on-site commander at Desert 1 who also recommended to abort the mission and the President concurred. One hour later, it was decided that one of the helicopters needed fuel to return to the Nimitz and that aircraft commander was directed to a C-130 with fuel. He could not taxi because of other aircraft so he had to lift up and move to one side to reach the aircraft. This movement resulted in a collision, explosion and fire which destroyed both aircraft. Some of the Delta Force members were able to exit successfully but there were 5 Air Force and 3 Marine fatalities. The situation on the ground was chaotic and the on-site commander now had to deal with an emergency departure from Desert 1. He advised the JTF Commander that he would report back as soon as he was confident that all personnel were accounted for and placed on C-130s for immediate departure for Masireh Island. It also was decided that all helicopters would be left behind. This was announced only after all forces were airborne and Desert 1 had been abandoned.

**C3 and ATC AT THE HIGHEST LEVEL** The C-130s that left Desert 1 with all personnel accounted for arrived at Masireh without incident. A C-141 aircraft was there to fly all the injured to Landstuhl Army Hospital. In the Pentagon, the CJCS continued to work with the National Security Advisor.

In the following week, the CJCS, JTF commander, and the Air Force general in charge of all the aircraft were called to appear before the U.S. Congress to address the failed mission. The Chairman advised me, however, "You will not be going to the Congress because all communications worked fine, so I don't need you there."

This was a positive reflection of the hard work performed by General Hyde at Langley AFB, Army Col Peter Dieck, who seemed to be everywhere, and their staffs.

Notably, the Air Traffic Control effort was extremely valuable at Desert 1 where no lighting could be visible. This made it extremely difficult with seven C-130s and six helicopters in the end all still dealing with the sandstorm that resulted in the terrible aircraft collision and loss of military service members' lives.

Throughout this entire attempted U.S. hostage rescue operation, however, the C3 and ATC systems worked well wherever and whenever needed. That is a testimony to the outstanding professionalism of the AFCC members who were directly involved in this complex and dangerous top secret military operation.

### From the CCC archives:

Other events in the Middle East spun out of the Iranian Revolution of 1979-1980. There, a strong imperial monarch, Shah Mohammed Reza Pahlavi had weakened under pressures from violent popular demonstrations. Abruptly, he chose to leave Iran in mid-January 1979; his departure threw the nation into a confusing state, with numerous political factions contesting for control. As order deteriorated, American military leaders moved quickly to evacuate all United States citizens from Iran.

AFCC people, members of the 1945th Communications Squadron (Detachment 1) in Tehran, Iran, operated communications for this evacuation mission. In neighboring Turkey, members of the 1st Combat Communications Squadron worked 12-hour shifts at Incirlik providing communications and coordinating the movement of American military and civilians. Following this evacuation, the Iranian revolution unraveled internally with little or no outside interference.

Internal tensions existed, however, especially in those rebel factions railing against outside nations, like the United States. In November 1979 one group of these revolutionaries seized the American Embassy, taking 66 hostages. Although all of the American hostages would not be released before 15 months had passed, the American government pressed day after day for their release. Air Force Satellite Communications enabled the command and control communications networks to function flawlessly.

In April 1980 a daring American rescue mission flew into Iran. AFCC communicators and air traffic controllers supported this hazardous mission. Though the mission itself failed,

communications received praise. (Provided by Dan Williams, Cyberspace Capabilities Center historian)

Note: 8 American servicemen and 1 Iranian civilian were killed during the attempt to rescue the hostages.



# Ushering in AI/ML Systems Requires a Virtuous Cycle

The preponderance of challenges associated with operationalizing AI/ML systems center on trust and ethics.

t seems almost every discussion touching on the future of warfighting holds promise for artificial intelligence and machine learning (Al/ML) fundamentally changing the nature of warfare.

This should not be a surprise, as information has always been the key ingredient to success in warfighting. For time immemorial, however, accurate information has been difficult to obtain. Success in combat, the theory goes, comes to those with an ability to sort through incomplete information, assess what was probable and what was unlikely, and then decide, ostensibly based on professional judgment honed by experience, inside the decision cycle of the adversary.



William J. Bender Chief Information Officer, US Air Force (retired) Senior Vice President Leidos As the world digitally transforms at a dizzying pace, data has become digital information and a proliferation of sources and sensors of data have been matched with incredible advances in data processing speed and scale. As a result, the amount of information to consider has overwhelmed

even the most wise and seasoned decision makers.

This reality of a digitally transformed world serves to further reinforce the shift in importance from availability of information to speed of decision making. Fortunately, the development of Al/ML enabled systems can enhance human decision making — assisting humans in a way that, despite the deluge of data and information, can lead to timely, accurate, effective and, perhaps most importantly, trusted and ethically sound decisions.

#### Overcoming "Information Overload"

Before we can realistically consider that AI/ML will allow us to overcome the challenge of "information overload" and turn it into an opportunity to accomplish the mission efficiently and effectively. it's important to realize there are significant concerns to be addressed first.





trust that AI will be secure without introducing new vulnerabilities or putting their most crucial activities at risk. The public must trust that AI will treat them fairly and behave responsibly, behaving ethically and safely.

The importance users, system owners and the public place on trusted Al/ML enhanced and enabled systems puts the onus on developers of these systems to do so in a disciplined, science-based approach.

In addition to considering any unique end user

requirements for data privacy, security, and assurance, in the technologies they develop, they must also adhere to a methodology of continuous development and to a foundation of governance, if they are to ensure Al/ML systems that are themselves, secure, reliable, resilient, and ethical.

What's called for is a scalable and iterative approach that continually builds toward trusted AI, and that is only possible when equal consideration and attention are given to both the technology and a methodology that incorporates human feedback and improvements as they occur in the field.

#### Balance Risk and Reward

Contemporary discussion on ethical AI/ML is skewed to the point of being one-sided. Naysayers and alarmists highlight the potential dangers associated with AI, pointing out a myriad of possible mistakes and miscalculations that could lead to dire consequences, including unnecessary damage or unwarranted deaths.

This argument, however, fails to consider the human failings and failures that form the baseline in warfighting today, where tragic consequences result from human error. When looked at this way, AI/ML enabled systems may help humans be more virtuous in their warfighting, helping to achieve more ethically aligned actions and decisions, than perhaps possible if made by humans alone.



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Lt Gen Bender was the Chief, Information Dominance and Chief Information Officer, Office of the Secretary of the Air Force, the Pentagon, Washington, D.C., until his retirement in 2017.

AI/ML enabled systems may help humans be more virtuous in their warfighting, helping to achieve more ethically aligned actions and decisions, than perhaps possible if made by humans alone.





## **COMMUNICATIONS HISTORY AT A GLANCE**

### By Ken Reiff, AFCATCA Historian

#### **MAJ GEN ROBERT F. McCARTHY**

*Historian Notes*: General McCarthy enlisted in the USAF in 1951 as an armament-munitions technician before earning his pilot wings and commission as a

second lieutenant through the aviation cadet program. Among others he flew B-26 and B-47 aircraft, served in both operations and communications career fields culminating as Commander, Air Force Communications Command. This article focuses on his leadership during the FAA Air Traffic Controllers Strike (AFCC/HO interview, Dr. Epstein, 7 September 1982).



<u>Decisions:</u> Where to get the controllers to support the national tasking to support the FAA, larger facilities being

first and then smaller numbers of controllers deployed to some outlying airports. *Maintaining ATC fighting forces overseas.* We felt that those controllers should remain in place. We looked at minimum staffing levels stateside to come up with the 635 controllers without adversely curtailing services throughout the Air Force. Each decision was governed by us intending to not adversely impact the safety of the air space assigned to us. Obviously, the operational force commanders were advised.

Since we were unsure of commercial flights, Military Airlift Command was requested to fly to designated locations and pick up the controllers to be deployed, private vehicles and commercial flights were also examined. This worked extremely well.

Key aspect of our operation was consideration of the major impact on our people; those who remained in garrison were not permitted to leave, they were not permitted to attend professional military education schools, nor were they routinely sent on permanent change of stations except for those fields that were required to meet our overseas commitments.

General McCarthy's decision to require the deployed controllers to wear their military uniforms was not agreed to by the Army and Navy. "I did not believe that any average US citizen seeing an individual in uniform of its country and recognize it because of the stripes he or she wore on their sleeve would physically harm the individual since it was apparent they were going to have to confront picket lines to get into some of the facilities. I stuck to that decision despite some heat from the other services. Though there was some intense verbal abuse, a couple of cases of car damage, no member of this command was injured by crossing the picket lines."

(Requests for additional information, preliminary planning, retentions rates, financial considerations may be requested from the AFCATCA Historian, <u>afcommatcdir@gmail.com</u>.)







Col Derrel Dempsey briefs Maj Gen Robert McCarthy in the AFCC Strike Task Force Operations Center on the deployment of AFCC air traffic controllers.

### 3Aug 1981

Unionized Federal Aviation Administration Air Traffic Controllers began a nationwide strike at 0700 eastern daylight time. Of the nation's 17,000 controllers, 13,000 participated in the strike. The Air Force Communications Command Air Traffic Controllers were immediately alerted according to previous contingency planning for such an event.

#### 3 Aug - Nov 1981

During the strike, controllers from all four of AFCC's Continental United States-based divisions, along with Army and Navy personnel, participated in eight deployments to FAA facilities throughout the United States as well as overseas. The Air Force Communications Command deployed 612 of its controllers to 138 FAA locations; other services provided 412 controllers, bringing the total to 1,024.

#### **MAJ GEN ADOLPHUS GREELY**

(Historian Notes: Maj Gen Adolphus Greely was

the Army's Chief Signal Officer at the time major change was forthcoming in communicationselectronics technology and aviation. Two of his disciples, George Owen Squier and Billy Mitchell, he mentored, also became Chief Signal Officers and both had profound impact during their tenure).

General Greeley enlisted in the Union Army during the American Civil War. He was wounded twice and awarded a Purple Heart with oak leaf cluster.



He is primarily noted for a failed Arctic Exploration which started with 25 members and only six survived. In 1887 he was appointed as Army's Chief Signal Officer with promotion from Captain to Brigadier General by President Grover Cleveland.

During his tenure, he was responsible for creating and maintaining worldwide communications networks during the Spanish-American War and the Philippine-American War. General Greely oversaw construction, operation, and maintenance of numerous telegraph lines in Puerto Rico (800 miles), Cuba (3,000 miles), Philippines (10,000 miles—George Owen Squier), and Alaska (4,000 miles of submarine cable and 107 miles of wireless telegraphy—Billy Mitchell). Additionally, his innovations led to the Army's fielding of wireless telegraphy, airplanes, motorized automobiles and trucks and modern equipment.

Upon his retirement from the Army, General Greely was awarded the Congressional Medal of Honor; one of two to ever receive the award for distinguished service to the United States. (\*Wikipedia and "George Owen Squier—Soldier, Inventor, Philanthropist").

#### **HEDY LAMARR**

Hedy was described as one of the greatest movie actresses of all time as a result of her performances during Hollywood's golden age. She was also an accredited inventor. She wanted to join the National Inventors Council but was reportedly told by NIC member Charles F. Kettering and others that she could better help the WW II war effort by using her celebrity status to sell war bonds.

During the war, Lamarr read that radio-controlled torpedoes had been proposed. However, an enemy might be able to jam such a torpedo's guidance system and set it off course. When discussing this with her friend, the composer and pianist George Antheil, the idea was raised that a frequencyhopping signal might prevent the torpedo's radio guidance system from being tracked or jammed. Antheil succeeded by synchronizing a miniaturized player piano mechanism with radio signals.

Antheil was introduced to Samuel Stuart Mackeown, a professor of radio-electrical engineering at Caltech, whom Lamarr employed for a year to implement the idea. Antheil and Lamarr



were granted a US Patent 2,292,387 on Aug 11, 1942. In 1997, Lamarr and Antheil received the Electronic Frontier Foundation Pioneer Award and the Bulbie Gnass Spirit of Achievement

Bronze award, given to individuals whose creative lifetime achievements in the arts, sciences, business, or inventions fields have significantly contributed to society. In 2014, Lamarr and Antheil were posthumously inducted into the National Inventors Hall of Fame.

Although the U.S. Navy did not adopt the technology until the 1960s, the principles of their work are incorporated into Bluetooth and GPS technology and are similar in methods used in legacy versions of WI-FI. (Wikipedia)

#### 1887-1903

As Chief Signal Officer, Maj Gen Greely fought and won the political battle to save the Signal Corps' very existence. He constantly reformed the Signal Corps, which included the Weather Bureau until the Department of Agriculture took it over in 1891. His innovations led to the Army's adoption of wireless telegraphy, the airplane, the automobile and other modern devices. Greely represented the United States at the International Telegraph Congress in London and the International Wireless Telegraph Congress in Berlin in 1903, and worked on some of the first international telecommunication treaties.

https://www.armyheritage.org/soldier-stories/fire-ice-adolphus-w-greely/





# MAJ GEN George owen Squier

Scientist, soldier, military strategist, electrical communications expert and inventor, aeronautical pioneer, diplomat, and philanthropist

# Squier contributed to aviation development

### By Ken Reiff

*Historian notes:* This is the second article on General Squier. It follows the article in the March 2023 *Communicator*. It would be an injustice for me to presume anything I write could compare to the extensive work published by Paul W Clark and Laurence A Lyons, "George Owen Squire, U.S. Army Major General, Inventor, Aviation Pioneer, Founder of MUSAK". I have used the book extensively with some direct quotes, and communicated directly with Professor Lyons.

In discussing the previous article and obtaining the book as a reference with our Board Chairman, Lt Gen Harry Raduege, he suggested that I write a bit more about General Squier covering some areas that I didn't include. I believe that the book should be a reference work for all of us cyber, communications, and air traffic control folks. There is a wealth of information on technology, leadership, inventions, business, and Army "politics". Noteworthy is the development of aviation and Squier's contributions.

One of General Squire's assignments brought him to Ft Leavenworth, KS, as Assistant Commandant of the Army's newly established professional education school and Commandant of the Signal School. His goals for the Signal School were to establish a link between Army line officers and instruction in technology, to establish a laboratory for experimentation, and to hold sessions where students and instructors could present findings written in their journals. (I found this interesting. In 1970, during his tenure as Hg AFCS, DCS Plans and Programs, Col Robert Edge set aside time each Friday afternoon for his Advanced Requirements/ Future Technology Staff to present their work for discussion. For example, Capt Ed Koch presented his work on Military Airlift Command's Management Information System, Lt Col Bill Marr updated the staff on communications satellites, and I presented AT&T's Engineering Economics).

One of the journal discussions, presented by Lieutenant Wieczorek on dirigibles and aircraft, Squier forwarded to the Chief, Signal Officer. It contended that both, if properly used, were needed. Dirigibles for "heavy" lift logistics and aircraft research and tests by the Wrights provided another dimension. It was obvious that Squier had either visited the Wrights in Dayton or exchanged data with his close confidants, Alexander Graham Bell and Octave Chanute. Additionally, those desiring Squier's contributions to the evolution of the airplane in the Army should consult the referenced book and look further at an association, Aero Club of America.



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As previously mentioned in the March 2023 article, Squier had 65 registered patents. One of his inventions was the Synchronograph. Prior to this invention teletype speeds were limited to 150 words per minute. His work with the British Postal System established a test network using the Whetstone Receiver, paired with the Synchronograph, and over long distances achieved speeds of 4,000 wpm. The network, based in the laboratory in London, transmitted to York, Glascow, Aberdeen and returned to London, a distance of 1,100 miles.

THE SECRET MISSIONS. General Squire spent four remarkable years in London as military attaché to the Court of Saint James. This was unusual as he was not considered a line officer. Simply put, the British wanted him. Although he

lacked the usual social credentials of an attaché, his reputation for electrical engineering provided valuable access to the scientific stratum of British society. The British Secretary of State for War, Lord Kitchener, personally granted Squier executive privilege to go with the British army in the field during WW I. No other attaché was granted access. He authorized him unlimited access to British gold coin via the Army paymaster to pay for his trips and he wanted Squier to "simply disappear" from London.

Squier made three trips and spent seven weeks touring and consulting with British and French war leaders and front-line soldiers. Kitchener gave him special permission to keep a personal diary of his travels in France. He recorded a wealth of information concerning supplies, messing, artillery, airplanes, personalities, motor vehicles, combat practices, cavalry, general staff practices and troop morale. His reporting on the use of airplanes and communications was extensive. In some cases, it changed U.S. Army doctrine.

General Squier returned to the United States in 1916 and was promoted from Lieutenant Colonel to Brigadier General and appointed Chief Signal Officer of the Army. His accomplishments in that role are, with one exception, left to the book's readers. He was adamant the Army needed technical laboratories; one for electrical technology and the other for aviation. The first was easy as Fort Monmouth, NJ, was selected as the location (Note: I graduated there with a diploma in Communications-Electronics Systems Engineering in 1970). The second location regarding aviation research and test required the approval of the Navy. After surveying 15 sites

jointly, the committee concluded that the Hampton-Langley site met both Navy and Army requirements. Squier sent a recommendation to purchase the land for \$290,000 and the Secretary of the Army approved it two days later.

During my research for this article, I also found a presentation by Dr. Lyons to the Dryden, MI, Historical Association which can be seen by searching for it on YouTube.

Our congratulations to Major General Squier for his selection for induction into the Cyberspace Operations and Support Hall of Fame in May 2023.

### George Squier with Captain Le Maitre, Aviation Corps, French Army



- Lord Kitchener, the Secretary of State for War, arranged for him to make a secret trip to the Western Front when no other attaché could
- Squier visited the front three times, more than any other attaché was allowed to visit, even those representing British allies



# The County Press Locally Owned — Locally Connected — Locally Committed

## Gen. Squier recognized Thursday at county commission meeting

JULY 29, 2023

BY KRYSTAL MORALEE CONTRIBUTING WRITER



Col. Ken Reiff, Col. Jay Adsit and Leslie McCormick came to the Lapeer County Board of Commissioners meeting Thursday to recognize Gen. Squier's induction into the Air Force Cyberspace and Air Traffic Control Association Hall of Fame.

LAPEER - Representatives from the Air Force Cyberspace and Air Traffic Control Association (AFCATCA) came before the Lapeer County Board of Commissioners on Thursday to present an eagle in recognition of Gen. George Owen Squier's contributions, not just to the Air Force, but to the world. Squier was inducted into the AFCATCA's hall of fame in May and has been selected for induction into the Air Force Cyberspace Operations and Support Hall of Fame.

Col. Ken Reiff, president of the AFCATCA, heard about Squier and started doing a little digging, which is when he learned how important Squier's contributions have been to life as we know it.

"I think... it's been a large disservice on the part of our Air Force to ignore General Squier's contributions," he said.

One of those contributions, multiplexing is a method by which multiple analog or digital signals are combined into one signal over a shared medium. Squier is credited with the development of telephone carrier multiplexing in 1910. Squier's interest and work in electronic communications have been recognized as among the most important for the Air Force, and yet, the man himself hasn't received much recognition. Perhaps it's because he didn't exactly play by the rules.

Seenextpage





November 2023 Communicator



**General Squier** Memorial Park

The General Squier Memorial Park is in Dryden Township in southeastern Lapeer County, MI. It was designated as a Michigan Historic Site on June 6, 1977 and later added to the National Register of Historic Places in 1986, as the Dryden Community Country Club-General Squier Historic Park Complex. The site is also known locally as the General George Squier Club or General Squier County Park. In 1917, Dryden native Maj Gen George Squier purchased the old flouring mill and a surrounding tract of 200 acres. Squier planned to develop the property into a summer home and a public park -- what he referred to as a free "Country Club for Country People." Squier refurbished the mill and built Forest Hall and a cottage in 1917, and added a two-story wooden lookout tower and tea house in 1920. Squier opened his Dryden Community Country Club in 1918, with no charge for admission. He built his own cottage on the site in 1920, and although he maintained homes in Washington DC and St Petersburg, FL, he returned to Dryden each summer. Over the years, he added other recreational equipment to the park. Squier died in 1934, and his sister, Mary Squier Park, deeded the property to Lapeer County. The property was renamed in Squier's honor and continues as a free recreational facility.

#### Contd from previous page

"He was a rascal. How he managed to maneuver without getting court martialed is unbelievable. Maybe that's just the northern Michigan attitude," said Reiff. "You can't run your cell phones without General Squier's contributions. You can't answer your telephone at home — if you still have a land line. You can't talk through a satellite. GPS would not exist. All of those things go back to that invention of multiplexing... The contributions of someone from this community made that happen, and I'm sure you're extremely proud."

Col. Jay Adsit, who was present for Thursday's presentation, said before Squier, the men in the airplanes were literally dropping messages to the boots on the ground, and Squier had the idea to put radios in the planes to communicate with those below. It worked.

Squier, said Adsit, had seeds of ideas. He was nurtured by his community and given the support and freedom to nourish and grow those ideas, which took root and grew into something that serves society as a whole.

Squier was born in Dryden in 1865, on his grandfather's 1836 homestead. He was raised by his grandfather and attended school in Dryden and Attica before leaving Lapeer County in 1883 having achieved an eighth-grade education. He graduated seventh in his class of 65 from the United States Military Academy — West Point — in 1887 and he went on to get his Ph.D. from Johns Hopkins University in 1893.

He served America through the U.S. Army signal corps during the Spanish-American War, the Philippine Insurrection, and World War I. His career was highlighted by major discoveries and inventions in mechanics and the communications field, most notably the telegraph and telephone systems. In 1897 he was firing canons and detonating mines by remote control; he used photography and electromagnetism to measure the velocity of artillery shells; and he established Army laboratories at Fort Monmouth for radio and at Langley Field, Va. for aviation.

In 1922, Squier created "Wired Radio," a service that piped music to businesses and subscribers over wires. He was granted several U.S. patents related to transmission of information signals and recognized the potential of this technology for delivering music to listeners without the use of radio. Inspired by Kodak as a trademark name, he combined music and Kodak to coin the name Muzak for the service.

It was after he retired from active military service that Squier started a park on the property of his summer residence in Dryden, which he purchased in 1917. That park — General Squier Memorial Park — is still serving the residents of Lapeer County to this day.

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Proud daughter Ken Reiff took this photo during the convention at Scott AFB, IL. Marge Stevens is the daughter of CMSgt Walter J. Chapman, Cyber Operations and Support Hall of Fame Class of 2018. She had never been to the Hall of Fame display in the atrium of the Lt Gen Grant building at Scott. Chief Chapman enlisted in the Air Force during WWII and served for over 50 years. The Chief was preeminent in the Air Force Engineering and Installation world and instrumental in a multitude of initiatives such as the development of Standard Installation Practices Technical Orders for legacy and new technologies. His Team Chief Handbook and SIPTOs are still in use today. Chief Chapman oversaw the Team Chief Academy curriculum and worked with Air Training Command to set up training programs for new technologies.







AFCATCA convention in conjunction with 80<sup>th</sup> anniversary celebration, Scott AFB IL April 23-28, 2023



Our Association joined the AACS Wing's successor organization– Cyberspace Capabilities Center, at Scott AFB–to celebrate the 80<sup>th</sup> anniversary of AACS, AFCS and AFCC, etc., April 23-28. Our Board of Directors canceled our regular convention normally held in September 2023.

We celebrated with current and former members, as well as members of the overall communications, cyber and air traffic control communities.

The Army Airways Communications System was first organized on Nov 15 1938, in the Directorate of Communications of the U.S. Army Air Corps. On April 13, 1943, the official lineage of the Army Airways Communications System as a separate organization began with the constitution of the Army Airways Communications System Wing. The Wing was activated as part of the Flight Control Command on April 26, 1943.

AFCATCA participated with CCC (host), AF Flight Standards Agency, and AF C4 Association.

Events included Social, Spring Update, golf tournament, Boeing offered a free tour of its McDonnell Prologue Room in St. Louis, Air Traffic Control and Flight Check Panel, Hall of Fame Induction (our members Col Tom Hickerson and Lori Manske), 80th anniversary Gala Dinner (keynote speaker was Lt Gen John S. Fairfield, USAF Ret, the final MAJCOM commander of AF Communications Command), and our General Membership meeting/seminar/breakfast on April 27.

## The week was filled with activities:



- A casual social event was held at the Silver Creek Saloon

- CCC hosted a golf tournament at Cardinal Creek Golf Course





- Boeing offered a free tour of its McDonnell Prologue Room in St. Louis

- Air Force Command, Control, Communications and Computer Association (AFC4A) held this year's Cyber

HALLOFFAME

Operations and Support Hall of Fame induction ceremony at Scott, instead of its normal induction in the DC area

- SAF/CN hosted its Spring Update



CCC and Air Force Cyberspace and Air Traffic Control Association hosted an Air Traffic Control and Flight Inspection panel

- AFCATCA hosted its annual breakfast, seminar, and awards presentations





Silver Creek Saloon





# SOCIAL

A gathering of attendees in town, with light refreshments and casual conversation

AIR FORCE CYBERSPACE AND AIR TRAFFIC CONTROL ASSOCIATION

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Photos by Janet Moreiko-Gagen



# *Cyber Operations and Support Hall of Fame induction ceremony*

Air Force Command, Control, Communications and Computer Association (AFC4A) held this year's Cyber Operations and Support Hall of Fame induction ceremony at the Scott AFB 80<sup>th</sup> anniversary celebration, instead of its normal induction in the DC area.











Maj Gen (ret) Earl Matthews\* presents award to Lt Gen (ret) Mike Basla (Class of 2021).

Maj Gen (ret) Earl Matthews presents award to Col (ret) Thomas Hickerson (Class of 2021).

Maj Gen (ret) Earl Matthews presents award to Lori Manske (Class of 2021).

Maj Gen (ret) Earl Matthews presents award to Rob Thomas II (Class of 2022).



Ret Maj Gen Earl Matthews, left, and Ms Lauren Knausenberger, right, pose with inductees. Ms Knausenberger was Chief Information Officer for the Air Force at the time of the ceremony.

\*Maj Gen Earl D. Matthews, USAF Retired, is president of AFC4A. He retired from the Air Force as Director, Cyberspace Operations, Office of Information Dominance and Chief Information Officer, Office of the Secretary of the Air Force, Pentagon, Washington D.C., until his retirement in 2014.







80<sup>th</sup> Anniversary



Scott AFBIL

Keynote speaker was Lt Gen John S. Fairfield, USAF Ret, the last MAJCOM commander of AF Communications Command.





# On display...

# **MARS** jacket

One of the items on display at the 80<sup>th</sup> anniversary gala was this MARS jacket, right photo, donated by Ken Reiff, left. He wore it while commander of the 1985<sup>th</sup> Communications Squadron, U-Tapao Royal Thai Navy Base, Thailand. It represents hundreds of thousands of MARS morale transmissions from SoutheastAsia during the Vietnam War. It was also worn by Reiff while deputy commander of the 2049<sup>th</sup> Comm Group during visits to the home of Arizona Senator Barry Goldwater, an avid amateur radio operator, to deliver and set up MARS equipment at his home. The 2049<sup>th</sup> CG managed the MARS warehouse, which reported to HQAir Force Communications Command MARS director. In photo with Reiff is Ed Broestl, our chaplain.





# Partyshirt

This Sawadee or "Party Shirt" was worn by Ken Reiff in 1975 when he was commander of the 1985th CS, U-Tapao Royal Thai AB, Thailand.

Sawadee party suits were an unofficial creation that arose in 1967 from the 357th Tactical Fighter Squadron at Takhli Royal Thai AB. They created "special flight suits" in response to the 8th Tactical Fighter Wing usage of black dyed cotton flight suits for social occasions.

The use of these colorful suits, popularly known as "Party Suits," was soon adopted by the Air Force flying units at the large bases in Thailand.

The tradition quickly spread to units in South Vietnam and to a limited degree, other locations in SoutheastAsia.

Party suit colors were consistent within the unit and generally had some standard form of name, rank and unit identification. Additional insignia, unofficial patches (usually humorous) and other embroidery was purely up to the creativity of the individual.

## **ATC and Flight Check Panel**

Hosted by AFCATCA and HQ CCC, a panel discussion was held by members representing these current missions. They spoke about where they stand today and the future of air traffic control and flight inspection. The panel was held in the AFCC Heritage Center in Building 1700, Scott AFB. From left, Lt Col James Arnold, commander, 375<sup>th</sup> Operations Group Detachment 1; Col Mike Ball (ret), former president, Flight Checkers Association; Col Rafael Quezada, former Chief, Aviation Integration and Career Field Manager, Pentagon; and Lt Col (ret) Edgar Wright, AF Flight Standards Agency executive director, Tinker AFB, OK.





## **General Membership Meeting** Agenda, April 27, 2023

- Call to Order Welcome
- **Pledge of Allegiance** •
- **Chaplain Broestl Invocation** .
- **General Membership Business Old/New** •
- Missed Roll Call presentation
- Association's Breakfast/ Seminar ATC Presentation – ATC Facilities' **Response during COVID-19 for Air Force**
- **Questions and Wrap-Up**



Retired Lt Gen Harry Raduege, Exec Dir, welcomes attendees





Convention host awards presented to Ken Reiff and Leslie McCormick

Awards were followed by "Missed Roll Call" and Air Traffic Control (ATC) Presentations – ATC Facilities Response during COVID-19 for Air Force Facilities, by CMSgt Jeffrey Vogel (Chief, US Air Force ATC Operations, Procedures & Training) and CMSgt (USAF, Ret) Dale Drake, along with Federal Aviation Administration Facilities by Col Rafael Quezada (USAF, Ret).



CMSgt (USAF, Ret) Dale Drake, left



**CMSgt Jeffrey** Vogeľ



Drake



CMSgt Dale Col Rafael Quezada (USAF, Ret)



Ken Reiff followed with a presentation that summarized the life of our Hall of Honor Inductee, Maj Gen George Owen Squier, USA. During the presentation Ken mentioned General Squier's various accomplishments and his impact on Communications beginning in the early 20<sup>th</sup> Century that are the "backbone" of today's technology, most notably signal multiplexing via cable and radio. He said that the award would be presented in Dryden, MI, by AFCATCA representatives later in the year.

General Raduege closed the meeting with remarks that included the location of the 2024 AFCATCA Convention at Dayton, OH. The meeting formally adjourned at 10:20 AM.









# 2024 ANNUAL CONVENTION

# SAVE THE DATE!

## Sept 26-29, 2024

The 2024 AFCATCA Convention will be held in Dayton, OH, from Sept 26–29, 2024 (Wednesday, Sept 25, is a travel date).

Our convention hotel will be the Double Tree in Dayton/Miamisburg.

We expect to offer tours of the National Museum of the US Air Force, the Dayton Aviation Heritage National Historical Park with the Wright Brothers Bicycle Shop, and Dayton's Carillon Park which show the impact of Dayton inventors on the way we live.

We will host the membership meeting on Saturday morning and the Awards Banquet on Saturday night.

Look for more details and the opportunity to register for the convention in the Spring *Communicator*.







WELCOME TO OHIO

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# Back before the digital age

#### By Harvey J. West A1C, 29170

#### Communications

On Dec 29, 1950, I arrived at Lackland AFB, TX, to begin basic training. It was very cold with light snow and we were lucky. My flight got the last tarpaper barracks.

Those who came in at night after us faced rain, light snow and freezing temperature. They had to help put up tents to shelter and worked most of the night putting up Tent City. There were 200-300 men.

When the tents were up during the night there were several men who hanged themselves. A friend told me there were two in his tent.

We were really lucky when we got to the base. They took us to the Mess Hall for early morning breakfast, and to our new home, as the flight chief called it. I was very lucky to have my cot right next to the wood heater.

I was wide awake a couple days later when the New Year came in. About 10 days in Basic, there was a need for drivers in the motor pool. When that was announced, 10 of us jumped at it to get out of basic and move into a warm barracks.

So we had 11 days of rough basic training. There were 24 of my high school friends in the flight.

#### **The Motor Pool**

Being in the Motor Pool I worked for almost all units on the Base. Inside the West gate on the left was the base computer and it covered a whole block. The punch cards of information to put in the computer were done down on the northeast side of Kelly AFB. There was 100-200 key punch operators there. At Lackland the base communications was a block over to the right. There were 10-15 employees working the Center.

A couple times I worked down on the Kelly flight line picking up the weather forecast and taking it to the control tower. I also made the run picking up the punch cards and bringing them back to the Base Computer.

On the Kelly AFB runways they kept a couple B-36 and the XC-99, the Air Force's biggest aircraft. On the way to work one day the XC-99 was taking off. The runways ran north south. That plane used the full runway. After Lackland had built barracks for the basics and three new mess halls, the base had an inspection. I worked the weather to air control tower on the flight line. That day 43 Generals came in for the inspection, each in their own aircraft. I was there and saw most of them come in–what a day it was! One came in every few minutes. I was very lucky to see that historical event.

#### Communications Tech School

When I was in the Motor Pool 18 months, my application for Tech School came up. My first choice was Radar and I was going to Biloxi, MS. I cleared the base and went to sign out, then they said I hadn't had my eyes checked. I had to be 10 points better than 20-20. Only a few have enough to go. So I didn't get to go.

In a couple weeks my second choice came up-Comm School 29150 at Warren AFB, Wyo. I was there for the threemonth class. My grade was second .48 hundredths less than first place. The top 10 got a stripe to Airman 3<sup>rd</sup> Class. I was TDY so I didn't get the upgrade and I was Airman 2nd. I sent all the class manuals and paperwork with a picture of the class to the Air Force Communications archives at Scott AFB, IL.

After School I came back to Lackland Comm Center JWFLN to work from August to April 1953; then on to 1932d AACS, Goose Bay, Labrador, to work the torn tape Radio Comm Center for a year. There I earned AFSC 29170 and then I rotated to Carswell AFB, TX, from April to December. I was working the traffic monitor at JWF switching center 2048<sup>th</sup> AACS.

Two weeks after I got out I had a dream that there was a desktop monitor on my mom's sewing machine. In the dream a voice said "you can send messages all over the world with this." Then I asked, "where is the keyboard?" The voice said, "You just plug it in." There were no desktop computers back then.

The Air Force Computer covered a whole block at Lackland using keypunch cards to feed information to the big computer. There was no WiFi, no cyberspace communications, the dream was telling me that it was in the future.

Here we are now with the 688th Cyberspace Wing at Joint Base San Antonio (Lackland), TX.



Harvey on a break



North barracks, left. Right, squadron mailroom and barracks



New Comm Center



**Base chapel** 



Flightline terminal; comm center upstairs



XC-99





# Comm troop looks back at Cam Ranh Bay

By George W. Hoyt, CMSgt, USAF (ret)

In the early days of the Vietnam War, an Air

Base was built on the undeveloped and isolated

about 15 miles long, half a mile wide, and is 11

east side of the peninsula, on the South China

fall of 1965 and shut down in April 1972 when

living conditions consisted of tents, mess kits,

and outdoor cold-water showers. Meals were

prepared by Air Force cooks on gasoline-fired

alternate places to eat or drink. We carefully

outdoor stoves. There was no radio, TV, BX, or

managed our electricity needs with only two light

bulbs and one AC outlet per eight-man tent. We

giving our very best in support of the war effort.

The work week at Cam Ranh Bay AB was 6 1/2

days. Sunday afternoons became our free time for

catching up on mail and personal items. Some of

us spent part of our Sunday afternoons at this

tolerated these austere living conditions while

the war ended. In those early days, our field

degrees north of the Equator. The beach is on the

Cam Ranh Bay Air Base began operating in the

Cam Ranh Bay Peninsula. The peninsula is

Hanoi



George on the flightline near the RAPCON at Cam Ranh Bay.



George in front of Comm/ATC Maintenance tent workshop in the spring of 1966.

wonderful beach. It was only five minutes from our tent area by vehicle, or a 20-minute walk.

Other than an old gun emplacement left over from WWII, there were no structures on the beach. It was totally untouched. The water was warm, clean, and crystal-clear. The sand underneath was hard packed with no coral, and the surf was mild and gentle.

The slope of the beach was so gradual that a person could wade out about 30 or 40 yards and the water was only chest deep. Sometimes, the surf was high enough where body surfing was possible. Because this beach was so naturally perfect, many of us thought it would be developed into a resort of some kind when the Vietnam War was over.

A few years ago, a "CRB alumni" ventured back to the Cam Ranh Bay peninsula and reported that this pristine beach area has not changed. It was still undeveloped and looked the same as it did when we were there half a century ago. Perhaps someday, it will become a vacation destination to be enjoyed by the travelers of the world.

Xuan Dai Bay





Photo of George taken on a high hill overlooking Cam Ranh Bay in April 1966.

## Vinh Van Phong Bay





Sea.

d

November 2023 Communicator

Cam Ranh Bay



**Air Force** Cyberspace, **Communications**, and Air Traffic **Control missions** 

## www.afcchca.org

**AIR FORCE** CYBERSPACE AND COMMUNICATIONS HERITAGE CENTER ASSOCIATION

AFCCHCA

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This is a private nonprofit organization. It is not part of the Department of Defense nor any of its components, and it has no governmental status.

#### By Jay Adsit

What a Convention--chock-full of events and information! The AF CIO's Spring Update; AF subject matter experts giving us the latest on great topics; the friendships; the camaraderie were all among the week's highlights.

We did notice something quite interesting. As the venues changed between the convention site and the Harold Grant Building on Scott AFB, we saw attendees take advantage of visiting the AF Cyberspace and Communications Heritage Center in the atrium of that building.

It's the only AF Heritage Center devoted to cyberspace and communications and the only one in Air Combat Command. There are many artifacts of historical significance with stories explaining them.

Four people with foresight were concerned about whether

## Scott AFB IL

the historical artifacts of our business would be well cared for in the future. They acted.

They formed an Illinois corporation, got IRS Section 501(c)(3) charity organization status, wrote a constitution and bylaws, appointed the first board of directors and officers all during the Spring of 2021. They, and we, are invested in this endeavor. You can too! Learn more about this association at <u>https://</u> www.afcchca.org/; you can also join it or donate to it at that site or mail your check to AFCCHCA, 911 Monterey Drive, O'Fallon IL 62269-2822. We welcome your participation and support for our heritage." (jadsit@att.net)

*Editor's note:* If you're going to be in the Scott AFB area and would like to visit the Heritage Center, you can contact the CCC Historian, Daniel Williams, <daniel.williams.74@us.af.mil> 618-229-6110





# AFCyberspace and ATC Association



#### Maj Gen Gerald L. Prather Cyber Systems Senior NCO of the Year

MSgt Larry Adams, 480th Intelligence, Surveillance, Reconnaissance Group, Fort Gordon, GA. MSgt Adams anchored an 18-member section responsible for maintaining 1,500 cyber assets. He safeguarded a \$56 million weapon system by ensuring the completion of over 4,000 warfighter requirements supporting 752 joint users. He led 40 members through 2 Command Post Training Events where he streamlined ticket resolution process and resolved 342 communications issues, enabling 20 Air Tasking Orders and 24,000 sorties. With his leadership, MSgt Adams was able to ready the first-ever US Space Force theater service component. He drove his team to configure the network systems for 32 United States and Republic of Korea personnel, thereby posturing the division for a 150 percent manning increase.

MSgt Adams cemented exercise communications capabilities for 8 joint air combat coordination cells by the successful deployment of 24 bilateral systems, which expedited the kill chain for 3 general officers and 28 staff members in support of air war execution.

After completing a 40-hour project management course, he was able to better manage a 12-system space cell upgrade. With the successful install of these systems, the warfighters were able to generate infrared missile defense control, protecting 30,000 US military personnel and 51 million host nation civilians.

He steered 20 technicians through 2 Air Operations Center communications exercises. With his oversight, the team conducted 212 cyber system operational tests and configured 67 battle stations. His actions amplified joint command and control training efficiency for coalition forces in their execution of 1,500 warfighter planning meetings.

MSgt Adams also steered communications support for a contingency operating location, and drove 124 system configurations over 3 networks and 468 periodic maintenance inspections.



#### Lt Gen Harry D. Raduege Cyber Systems NCO of the Year

**SSgt Alan Kim,** Operations NCOIC, 792d Intelligence Support Squadron, Joint Base Pearl Harbor-Hickam, Hawaii. He guided 23 Airmen across three AF Specialty Codes to implement technical solutions for the \$425M Distributed Ground Station-5 weapon system.

SSgt Kim served as the Joint Worldwide Intelligence Communications System operations planning lead, briefing senior leaders on crucial program processes and advancing an enterprise-level Communications Focal Point solution for 4.7K personnel. He engineered the resolution for a high-visibility quarantine issue for INDOPACOM, leading to the elimination of 2.9K severe domain threats and 239 mission system exploitations.

He directed executive communications support for the 480th Intelligence, Surveillance and Reconnaissance Wing's largest conference by configuring five secure teleconferencing solutions which enabled command and control capabilities for strategic planning, spanning six groups and 23 squadrons.

His superior skill set was evident by providing technical support for exercise VALIANT SHIELD by building two mobile communications suites for 39 general officers, validating and showcasing MQ-9 agility for Distributed Common Ground System air component dynamic targeting.

SSgt Kim drove the modernization efforts for the Air Domain Awareness Cell by coordinating a six-member team and establishing 14 high-power systems at the top secret level. His support enhanced the preparation and training for 21 new intelligence operations and resulted in securing humanitarian aid for the Ukraine crisis.

Finally, his efforts garnered his team the 86th Airlift Wing's Lt Gen Harold W. Grant Unit Award for Information Dominance and SSgt Kim personally earned the Humanitarian Service Medal.





#### Maj Gen Van C. Doubleday ATC Enlisted Manager of the Year

**MSgt Jacob Burkhalter** excelled as the Non-Commissioned Officer in Charge of Contingency Airfield Operations while assigned to the 53rd Air Traffic Control Squadron, Robins AFB, Ga.

During this period, MSgt Burkhalter established Air Combat Command's sole Landing Zone Safety Officer Course. He developed 22 lesson plans and trained personnel across four separate wings, providing critical training for the first Lead Wing deployment.

MSgt Burkhalter advanced an Air Force-level initiative by developing landing zone inclement weather procedures. He then secured Total Force aircraft support to validate these procedures, ultimately expanding austere instrument meteorological condition capabilities.

MSgt Burkhalter's expertise proved critical while acting as the Air Combat Command representative for establishing Landing Zone training guidance. He led 11 personnel, initiated 23 changes, and allowed warfighter CONOPS for five Air Force specialties across three Major Commands.

These accomplishments garnered MSgt Burkhalter the Squadron Senior NCO of the Year and Wing Team of the Year awards.



#### CMSgt Walter D. McLain Air Traffic Controller of the Year

SrA Eric Van Dyke is a Radar Approach Controller with the 23<sup>rd</sup> Operations Support Squadron at Moody AFB, Ga. During 2022, SrA Van Dyke showcased his leadership and expertise when selected as a participant in the Department of Defense's first \$8,000,000 Remote Virtual Control Tower project. He led an 8-member team through 2,500 operations over six weeks and rectified 25 errors, transforming future strategies for remote tower usage worldwide. Additionally, SrA Van Dyke demonstrated exceptional poise when he overcame a critical equipment failure. He coordinated with eight agencies while maintaining the safe flow of aircraft for 120 operations, significantly reducing delays while operating at 50 percent system capability. SrA Van Dyke was vital to the establishment of an austere airfield for a joint exercise, where he secured 19 radios, 25 night vision goggle devices, and completed 86 airfield inspections, solidifying airfield operations support for the U.S. Marine Corps' largest Combined Arms Exercise.



# Annual Award Winners

Cyber Systems Senior NCO of the Year Cyber Systems NCO of the Year Air Traffic Control Enlisted Manager of the Year Air Traffic Controller of the Year

# **Air Force Flight Inspection history**

#### WW II AND 1950s

Our Air Force Flight Inspection history goes back to 1938, in the Army Airways Communications Service, just prior to World War II.

Increased navigational aids, and eventually radars, required dedicated flight checking.

Headquarters AACS established the 1856th AACS Squadron (Facility Checking), the first unit specifically charged with flight inspection of navigational aids, in January 1949, the first of 20 AACS/AFCC units to bear the facility checking title.

In April 1952, Air Force Regulation 2G-51A formally recognized the flight inspection mission as a necessary function of AACS.

Some also did operational evaluations of air traffic control as many of the pilots then had ATC qualifications.

Beacons used for navigation were supplemented by Ground Control Approach (GCA) (1943), Instrument Landing Systems (ILS), VHF omnidirectional range (VOR) (1953) and Tactical Air Navigation (TACAN) 1954.

#### **PROJECT FRIENDSHIP - 1960**

A Federal Aviation Agency (FAA) study entitled "Project Friendship" proposed transferring military air traffic control functions to FAA.

Most flight inspection and many aircrews were transferred to FAA. FAA could not be depended on to provide flight inspection in combat zones or even contingency areas, so some aircraft (including new C-140s) were retained in the USAF.

Headquarters USAF and the FAA agreed that AACS would maintain and operate certain FAA-selected Air Force radio navigation aid facilities in accordance with mutually agreed upon FAA/USAF standards. Facilities involved included TACANs, VORs, and low frequency radio beacons.



Each of the AACS Facility Checking Flights was redesignated as simply a Facility Checking Flight. There were then 13 Facility Checking Flights in AFCS.

#### ADVENT OF THE C-140s -- 1962

In order to manage the service evaluation mission, AFCS established three geographic areas of responsibility—one in Europe, one in the Pacific, and one in the continental United States. One T-33 was to be assigned to the Pacific, three to Europe, and five to the continental United States.

The new C-140 aircraft, the first aircraft purchased to perform the military navigational aid flight inspection mission, would be allocated along the same geographic areas to provide emergency mission support and to supplement the service evaluation program.

Three new units were established to which the aircraft and crews were assigned: the 1866th Facility Checking Flight (Service Evaluation), Scott AFB, IL, the 1868th Facility Checking Flight (Service Evaluation), Wiesbaden AB, Germany, and the 1867th Facility Checking Flight (Service Evaluation), Clark AB, Philippines.

#### VIETNAM AND SOUTHEAST ASIA

In accordance with Project Friendship, flight check responsibility in Southeast Asia was turned over to the FAA in all areas except contingency operations. The navigational aids in areas of hostile action--the Republic of Vietnam, Cambodia, Thailand, and 1st Mobile Communications Squadron assets-remained



Jack Scott of the 59th Army Airways Communications System Group stands by a B-25 flight check aircraft. 1945



MSgt Clarence J. Nibblett at the flight check panel installed in an AT-29/ AC-131 aircraft. 1960



A parked Douglas C-47A (S/N 43-16083) with Air Force Communications Service (AFCS) markings and painted in the bright orange and white flight check scheme. April 1962



An Air Force Communications Service C-140 Jet Star flight check aircraft, flies over the Richards-Gebaur AFB MO flightline.



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the responsibility of the USAF. The 1867th Facility Check Flight (Service Evaluation) was organized at Clark AB, Philippines.

In January 1966, the Air Force Communications Service's three facility checking flights (1866th, 1867th, and 1868th) were redesignated as facility checking squadrons.

In June 1966, The flight inspection aircraft were repainted. Because of hostile ground fire in the Southeast Asia combat zones, the silver and bright red flight inspection aircraft were camouflaged.

In April 1967, two of the EC-47 aircraft from the 1869th Facility Checking Squadron at Tinker AFB, OK, transferred to the 1867th Facility Checking Squadron at Clark AB, Philippines, to provide flight inspection of Army and Marine navigational aids in Vietnam.

#### **VIETNAM ERA FLIGHT CHECK**

As hostilities built up in the 60s, many of the USAF Flight Check assets were transferred to the 1867<sup>th</sup> FCS (part of Air Force Communications Command) at Clark AB.

When I joined the 1867<sup>th</sup> in 1971, we had four C-140 JetStars and two EC-47s doing Flight Inspection throughout Southeast Asia.We also still did Ops Eval when mission parameters permitted. Post Vietnam the four C-140s were relocated to Scott AFB, IL. The EC-47s had been transferred to the VietNam air force. The 1867<sup>th</sup> and 1868<sup>th</sup> FCS organizations eventually each had a single T-39.

#### 1980s - TIMES OF CHANGE

In March 1987 Headquarters USAF reviewed the mission and structure of AFCC. AFCC retained its major command status, but lost its flight check mission (and the command's last six aircraft). In October 1987 AFCC transferred its six aircraft and their associated flight inspection mission to the

Military Airlift Command. AFCC had performed this mission since 1942. AFCC's 1867th and 1868th Facility Checking Squadrons were inactivated, and the 1866th Facility Checking Squadron was redesignated the 1467th Facility Checking Squadron.

Because of the illustrious wartime accomplishments of the 1867th, its lineage transferred to the new 1467th Facility Checking Squadron.

In 1988-90 C-29s were procured to replace aging C-140s.

#### **MORE FRIENDSHIP – 1990**

In 1990, CSAF directed transfer of the Military Airlift Command Flight Inspection capability to FAA. When Combat/Contingency Flight Inspection was raised, the Air Staff Division Chief responsible for ATCALS areas was directed to work it out.

In 1991 an FAA-USAF Memorandum of Agreement was established, activating Det 1. FAA absorbed combat flight inspection mission. Det 1 personnel were assigned to AFFSA. Lawrence "Rock" Verrochi was the last 1467th FCS Commander. He transferred the C-29s to FAA.

#### 375<sup>TH</sup> OG, DET 1

In 1998 an active Reserve component was activated with 23 personnel. In 2010 Headquarters Air Force transferred combat flight inspection personnel from AFFSA to 375th Air Mobility Wing, Scott AFB.

#### TODAY

The active duty Air Force personnel assigned to FAA at Will Rogers are a Detachment of the Air Mobility Command's 375<sup>th</sup> Operations Group at Scott AFB.

Reserve aircrew are assigned to the 1<sup>st</sup> Aviation Safety Flight Airport.

In 2019, active duty manning increased to 27. FAA has daily operational control of all the USAF personnel as far as duty assignments and certifications. In a contingency, the theater commander requests FAA flight inspection and an all military crew flies the mission.



An 1866th Facility Checking Squadron flight inspection technician talks to the flight check pilot while looking at the approaching flight check aircraft through a theodolite.



Inside view of one of Air Force Communications Command's C-140 Jet Stars, with CMSgt Tony Haus working the flight inspection equipment console.



A flight inspection technician gives the aircrew in the AFCC C-140 "Jet Star" a thumbs up indicating a successful glide slope run. Note the theodolite set up beside the runway to record flight inspection data.



The 375th Operations Group, Det 1, was visited by 375th AMW leadership. In 2010, this detachment stood up under Scott's 375th Operations Group as part of the Federal Aviation Administration's Mike Monroney Aeronautical Center, in Oklahoma City, OK. 2015





#### Air Force Cyberspace and Air Traffic Control Association

#### **Membership Application**

#### MAIL TO: Leslie McCormick, 1029 W Battlefield St, Apt B102, Springfield MO 65807-4267

#### **Types of Membership**

Life & Regular Memberships are based on service as a commissioned officer, warrant officer, noncommissioned officer, enlisted or civilian, who served or is serving in any communications/information/cyber or air traffic control unit in any Air Force Major Air Command or Joint Command. Spouses of a living member are also eligible for Regular membership. The Life Membership of a deceased Life Member may be transferred to the spouse if requested by the spouse. Associate Membership is subject to the approval of the Board of Directors for individuals who actively supported any communications/information/cyber or air traffic control activity, but otherwise do not meet the criteria for Life or Regular Membership. Associate Members are not eligible to vote or to hold office in the Association.

**Regular and Associate Membership dues are \$42.00** due every two years.

Life Memberships are \$150.00
Renewal New Membership Life Membership Associate
Amount enclosed: \$ (Make check payable to "AF Cyberspace and Air Traffic Controllers Association")
PRINT CLEARLY – PLEASE COMPLETE ALL INFORMATION
Date://
First Name MI Last Name
Street Address
CityStateZip code
Phone Number ()
e-Mail Address:
Year of Birth Spouse's Name
Service Status:
Are you a present or former member of the United States Air Force?
If not, are you a spouse, widow, widower, ancestor, or lineal descendant of an individual who meets the requirement above? □ Yes □ No
Dates Served (e.g. 1950-54) Career Field
War Time ERA:
□ Vietnam (Feb 28, 1961-May 7, 1975) □ Gulf (Aug 2, 1990-present)
Highest Rank: Did you retire from the USAF?
Do you wish to have a copy of the Communicator mailed to you (it is available on the web): □ Yes □ No
How were you recruited: (Members name, magazine, website, etc)

If you have any questions, contact Leslie McCormick at (417) 365-1837



November 2023 Communicator

AF C	CYBERSI NIT FORGE Reference and ATC	PACE AND A	IR TRAFFIC	CONTRO	OL ASS	
AF( \$15	CATCA hat	AFCATCA jacket \$59	AFCATCA blue golf shirts \$42	AFCATCA challenge coin \$	14	Special order wood-carved plaque
Name:			Date:			
Email:			Phone:	·		
Address:						
QUANTITY	DESCRI	PTION		SIZE	TOTA	L
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(Note:	AFCATCA Ja Jackets will	acket with logo (zip be special order or	oper) nly with possible de	lay of sever	al weeks.)	
	SMLX	L @ \$59 each			\$	_
	AFCATCA B S M L X	Blue Golf Shirts (uni L @ \$42 each	isex)		\$	-
	AFCATCA C	hallengeCoin 🛛 🧔	\$14 each		\$	_
(Note: Price in	icreases are	due to postage inc	rease and increase	in costs to t	he associat	tion.)
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Donation (Tax	x deductible	within limits of lav	w) Receipt: Yes	No	\$	
			GRANE	<b>TOTAL</b>	\$	
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## AACS, AFCS and AFCC Wood Carved Wall Plaques

Cost (including shipping): \$40 each

Makes checks out to AF Cyberspace and ATC Association and mail to:

William Cassatt 1200 Homelife Plaza Apt. D-3 Rolla, Missouri 65401

These wood-carved plaques are special order and will take about 2-3 weeks for delivery.

Size: 10 <sup>1</sup>/<sub>2</sub> inches





# **HOW IT BEGAN**

Many in this association saw air traffic control take a technological leap forward with the introduction of radar in the 1950s. Some saw air and ground radio stations transform from continuous wave Morse Code to radio telephone. Many witnessed the advent of the computer. They all helped the military increase the quantity and quality of communications, data automation, and air traffic control systems to meet changing needs.

Formerly called AACS Alumni Association (1977 to 2008), AACS stood for both the Army Airways Communications System and the Airways and Air Communications Service. Because missions were basically the same, the AACS Alumni Association expanded membership to include AFCS, AF Communications Command, AF Command, Control, Communications & Computer Agency, AF Communications Agency, Cyberspace Capabilities Center, AF Flight Standards Agency, and other major commands up to and including today's organizational structure.

On Sept 27, 2008, the AACS Alumni Association became AF Communicators and Air Traffic Controllers Association to reflect its membership.

On July 1, 2020, our association became the AF Cyberspace and Air Traffic Control Association, because communicators are now referred to as cyberspace operators.

#### TAX STATUS

The AF Cyberspace and Air Traffic Control Association is an IRS Code 501(c)3 organization. Donations to the Association are tax deductible when filing IRS Form 1040.

#### **OUR HISTORY**

The AACS Alumni Association was formed on Sept 30, 1977. Larry and Doris Camp were visiting Dux and Pearl LeDoux in Eunice, LA in 1976 when the subject of old military friends came up. Larry and Dux were assigned to the 5<sup>th</sup> AACS Wing in Europe. What began as an invite to a poker weekend in Columbus, OH (Larry and Dux were part of a London, England poker group for AACS detachment commanders) to be hosted by the Camps, turned out to be the first annual reunion.

The couples contacted old friends, who in turn contacted others, and so on. A large number of former AACS troops and spouses made their way to Columbus and the result would become known as the AACS Alumni Association. The title at that time was derived from Army Airways Communications System and Airways and Air Communications Service. Individuals who were part of the first reunion had been assigned to AACS units before, during and after World War II, the Korean Conflict, and up to 1961 when AACS became a major command and was renamed the AF Communications Service (AFCS).

An annual convention is held in different cities each year. They usually begin on the last Thursday of September and end the following Sunday. The Association operates on membership dues and donations. Association dues are minimal: \$42 every two years. Life memberships are \$150.

The old blue original AACS logo was previously the official Association logo. In 2020, our Association introduced its new name, Air Force Cyberspace and Air Traffic Control Association, and its new logo.

#### WHAT'S IN A NAME

In 1938 the Army Airways Communications System (AACS) was formed. During World War II, for a short time it was renamed the Army Airways Communications Wing, and then the Air Communications Service, but that only lasted 9 months. When the clamor reached the halls of the Pentagon to retain the AACS designation, it was renamed the Airways and Air Communications Service (AACS) in 1946. This new designation was also a better fit due to the high volume of airplanes flying through U.S. and U.S.-Controlled airspace and the need to control airways.

In 1961 AACS was elevated to major air command status and was renamed the Air Force Communications Service (AFCS). This designation remained until 1979 when it was renamed Air Force Communications Command (AFCC).

Status of the unit changed from major command to a field operating agency on July 1, 1991, and redesignated as: Air Force Command, Control, Communications, and Computer Agency on May 28, 1993; Air Force Communications Agency on June 13, 1996. Status of the unit changed from a field operating agency of USAF to a subordinate unit of the Air Force Communications and Information Center on April 1, 1997, Status of unit changed from a subordinate unit of the Air Force **Communications and Information Center to a field** operating agency of the USAF on Oct 1, 2000. Status of unit changed from field operating agency of USAF to a subordinate unit of the Air Force Space Command on May 4. 2009. Redesignated as Air Force Network Integration Center on July 15, 2009. AFNIC was re-designated as the Headquarters Cyberspace Capabilities Center (CCC) on Nov 7, 2019, reporting to Air Combat Command.

AF Cyberspace & ATC Assoc Editor 665 N 11th St Breese IL 62230-1018 Change Service Requested





Members: Check address label for date and/or year dues expire (number before your first name). If it's '23' dues expire Dec 2023. Next edition will not be mailed if dues have expired.

Our association is comprised of about 1,000 members (Communicators, Data Automation, Cyber, Space Operations, Air Traffic Controllers, Air Field Managers, Maintenance, Engineering and Installation, combat communications, and related support personnel) who have served or are serving in any communications or air traffic control unit. This includes those who served in the U.S. Army Air Corps or hold or held a communications, data automation, information/cyber, air traffic control, maintenance, engineering and installation or related support skill set.

The term Communicators includes ALL operational, maintenance, administrative skills and other skills in the U.S. Army Air Corps and the U.S. Air Force (including Air National Guard and Reserve, veterans, active duty, civilian, and retired) communications, data automation, or air traffic control units.

We were formerly called the "AACS Alumni Association" from 1977 until Sept 27, 2008.

We changed our name to AF Communicators and Air Traffic Controllers Association because the Airways and Air Communications Service (AACS) was elevated to Major Air Command status and redesignated Air Force Communications Service in 1961.

We changed again July 1, 2020, to AF Cyberspace and Air Traffic Control Association. Throughout the Air Force, Cyber Warfare Operations has become the new career field title for what we have known as the communications career field. All Air Force members who traditionally were identified as communicators are now referred to as Cyberspace Operators.



> To foster continued awareness of the Air Force communications, data automation, air traffic control and cyberspace missions previously accomplished by AACS, AFCS, AFCC, AFC4A, AFCA, AFNIC, CCC, AFFSA, other past and current commands (AFSPC, ACC, AMC, AFMC, etc.).

> To provide a forum for educational and humanitarian services, to renew and make new friendships, and to exchange ideas of common interest concerning people and activities associated with communications, cyber, and air traffic control.

> To fully support the goals and missions of the U.S. Air Force and to honor each year the ATC Enlisted Manager, Air Traffic Controller, Cyber Systems Senior NCO, and Cyber Systems NCO of the Year.

> To make charitable contributions to worthy veteran organizations or related causes.

> To manage our Association to be viable for those airmen/officers/civilians serving today.