AIR FORCE ASSOCIATION'S
CYBERPATRIOT
CyberSentinel

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In This Issue

The CyberSentinel has a new look!

National Commissioner's Cache

Who could have predicted any of this? Unprecedented in any of our lifetimes, a pernicious virus has perturbed so many lives, programs, and activities. Our hearts go out to the victims and their families and friends. And our focus is on prudently carrying on with what has become an even more vital need in attracting youth to desperately understaffed career fields. Thank you for adapting to the realities of "virtualized" CyberPatriot programs including our recent Virtual National Finals Competition and virtualized instantiations of CyberCamps. We are tremendously grateful for the adaptability of coaches, mentors, team assistants, proctors, competitors, and campers. And we have great news in the CyberGenerations program as well, as we will soon release a virtual curriculum for it as well. Thank you for persevering with us!

CyberPatriot XII winners crowned; Virtual National Finals Competition a Success!

For the first time in program history, CyberPatriot held an in-home National Finals Competition on May 2, 2020. Connecting through a Virtual Private Network (VPN) to CyberPatriot's servers, competitors had 3 ½ hours to find and fix as many security issues as they could in seven Windows or Linux operating systems, all while fending off a virtual Red Team of cybersecurity professionals. Teams also had a 90-minute Cisco NetAcad Challenge requiring them to build a complex but secure network using the Cisco Packet Tracer network simulation tool.

Winners were announced the following evening in a live-stream event! If you haven't already seen it, check out the Awards Ceremony video! A full list of winners can be viewed here.

CIAS Spotlight

CyberPatriot continues to thrive because of the support from a variety of parties -- coaches, parents, students, sponsors. The list is long. But CyberPatriot would never have ever achieved the growth it has without the support of a key founding partner, the Center for Infrastructure Assurance and Security (CIAS) at the University of Texas San Antonio.

CIAS was one of the four founding members along with AFA for the CyberPatriot Program. In fact Dr. Keith Harrison, Dwayne Williams and Dr. Greg White were all at the first CyberPatriot event. By 2012, CyberPatriot had outgrown its original competition system. The number of teams participating in CyberPatriot was well over 1,000 and a new system was needed. Dr. Greg White and his team at CIAS were asked to develop a competition system that could easily scale to a large number of teams. Dr. White wrote the original CONOPS while on active duty assignment for the Air Force as part of the USAF Reserves. Dwayne Williams led the CIAS planning effort and with the help of Dr. Keith Harrison created the CyberPatriot Competition System (CCS), which is now used in all competition images. Dr. Harrison is truly the mastermind behind the software these days, as he is the primary coder.

CCS made its debut during CP-V and exceeded expectations. It gave the competitors near real-time scoring feedback and a public scoreboard, making the competition much more interactive. By 2014 it was a full-up competition system using Windows and Linux-based systems. It easily met the growing requirements of the CyberPatriot program. Over the years the system has continued to keep pace with CyberPatriot's growing needs and the needs of sister competitions in Europe and Australia. Dr. White and his team have advanced the program allowing for red team activity and competition injects.

"It's been a privilege to be part of CyberPatriot for all these years," explained Dr. White. "While we knew it was going to be popular when we started, no one expected the kind of growth we've seen over the past decade. The CIAS is really looking forward to working with AFA and seeing where CyberPatriot goes in the next ten years."

CIAS also created the CyberCamp curriculum and images that were rolled out as a pilot program in the summer of 2015. And in 2016, students from the Center helped create the games that are now the foundation of CyberPatriot's Elementary School Cyber Education Initiative.

Today, CIAS is working on a CyberPatriot demo that can be used to promote the program at a variety of events and allow prospective Coaches and competitors to get the look and feel of the CyberPatriot competition without actually downloading images. The demo is expected to be completed by October 2020.

Bernie Skoch, CyberPatriot's National Commissioner, described the program's relationship with CIAS this way. "CyberPatriot began without a blueprint. There was no template, there was no cookbook. Instead, the program depended entirely on a small group of 'founders' to provide the vision, the plan, and the resources to make the program a success. No entity played any greater role in that than did CIAS. They have been critical to the program's success since its inception, and I can say unequivocally that without CIAS as a founding partner, CyberPatriot would not exist as it does today--as a world-leading cyber education program."

AFA CyberCamps underway, hosted virtually

The first week of AFA CyberCamps kicked off on June 8, and for the first time hosting organizations will have the option to conduct their camps virtually. Despite the obstacles caused by COVID-19, over 345 camps are scheduled to take place across the country this summer.

We checked in with a few of our CyberCamps from across the country to see how they are doing.
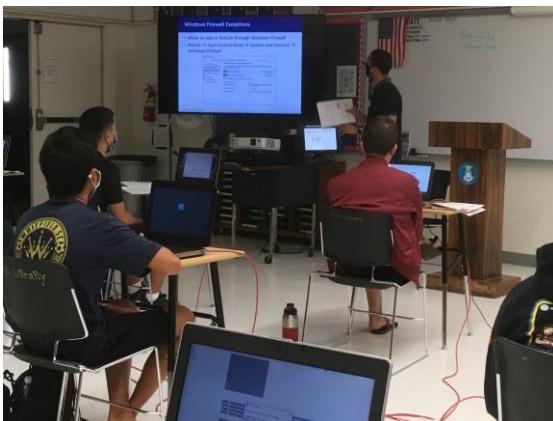
In Hawaii, SSgt Ryan Benford, USAF led an in-person Standard CyberCamp from July 13-17. SSgt Benford, featured in the picture below is teaching the campers about Windows Firewall Exceptions.

At the National Cybersecurity Center in Colorado Springs they had record registration for their 7 registered Standard and Advanced CyberCamps. They hosted six in-person camps that all filled up and one virtual camp that had 60 campers registered.

Tom Clark from the Fort Gordon Cyber District said, "60 middle schoolers and high schoolers are in the Fort Gordon Cyber District/Alliance for Cyber Education's first ever virtual Advanced CyberPatriot Camp this week. The students are mostly from Georgia and South Carolina but we also have students from Pennsylvania, Tennessee, California, and Canada! The CyberPatriot team and our instructors are Cyber Rockstars!"

CyberPatriot XIII Update

Team registration for the next competition season - CyberPatriot XIII – is open now through October 15, 2020. The competition is open to all high schools, middle schools, home schools and approved youth organizations. Over 2000 teams have registered so far. Check out the full list of currently registered CP-XIII teams.

Cyber Education Literature Series comes to life with book reading

Thanks to the great folks from the Fort Gordon Alliance for Cyber Education, CyberPatriot's Cyber Education Literature Series has been brought to life! Check out this reading of Sarah the Cyber Hero done by Dr. Tom Clark.
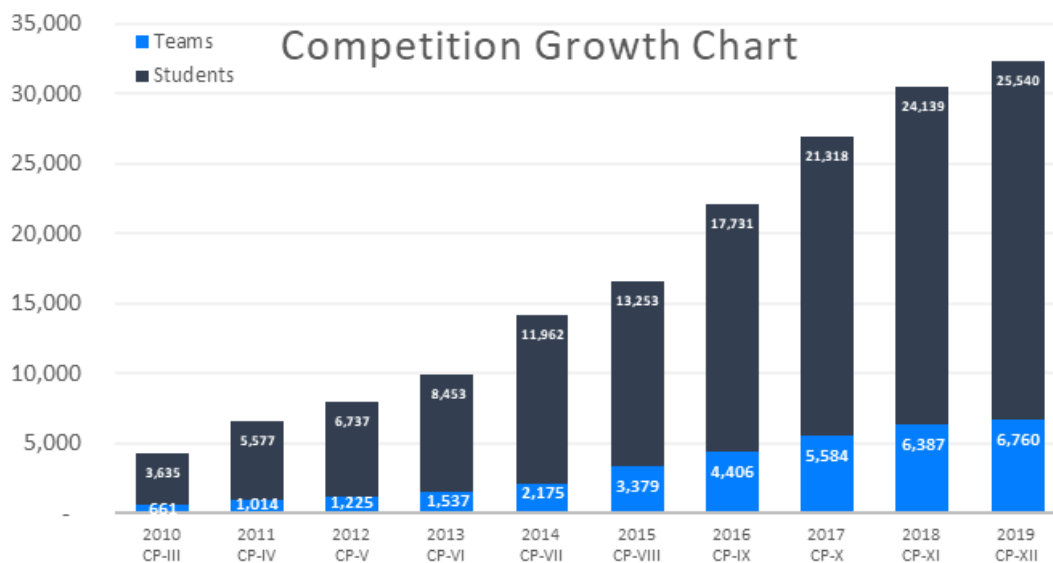
Coming next month will be a reading of Ben the Cyber Defender, the newest book in the children's literature series. The story follows Ben, a typical kid with a not-so-typical passion for cybersecurity and helping others.

Great for kids and grandkids, Ben the Cyber Defender and Sarah the Cyber Hero can be purchased from Amazon or Bookbaby.com.

CyberPatriot 2020 Annual Report

CyberPatriot recently released the 2020 Annual Report with new findings on all five of their programs. This year's report is one of a kind as it includes a section dedicated to the response efforts for COVID-19. In the report you can find statistics on program growth, updates on each program, and testimonials from CyberPatriot Alumni. You can find the full report by clicking here.

Highlights from the report demonstrate the growth for our CyberPatriot Competition from CP-III to CP-XII.

Competition Growth Chart

Year	Teams	Students
2010 CP-III	661	3,635
2011 CP-IV	1,014	5,577
2012 CP-V	1,225	6,737
2013 CP-VI	1,537	8,453
2014 CP-VII	2,175	11,962
2015 CP-VIII	3,379	13,253
2016 CP-IX	4,406	17,731
2017 CP-X	5,584	21,318
2018 CP-XI	6,387	24,139
2019 CP-XII	6,760	25,540

In her own word, Monica Saraf, a CyberPatriot Alumni said:

"I am currently a consultant with a cybersecurity firm in Sterling, VA, and interned at NASA's Goddard Space Flight Center this past summer with a cloud cybersecurity research project. I presented in front of major directors within the Space Communications and Navigations division. I will be majoring in cybersecurity for my undergrad as well but am still deciding where I will go.

"Originally didn't think that I would be very interested in cybersecurity, but after I tried CyberPatriot in 7th grade, it became something I wanted to do for the rest of my life. I founded the club at my school with another fellow CyberPatriot competitor. I still work to train others and teach them everything that I've learned over the years. I think it's very important to spread knowledge and encourage others. It's made a huge difference for me and all the experiences I've had over the past six years."

National Youth Cyber Competition Registration Report is now available for 2019-2020 competition season

Each year CyberPatriot published a registration report that breaks down the make-up of students competing in the youth cyber defense competition. The breakdown includes registration by location, registration by organization type, and Competitor demographics.

To view the full statistics from the 2019-2020 National Youth Cyber Defense Competition Registration Report, click here.

CyberPatriot Alumni Report 2020

Every two years, CyberPatriot conducts an Alumni Survey Report that assesses responses from current and former CyberPatriot competitors. The purpose of this survey is to determine the rate at which CyberPatriot is achieving its goal of attracting students to education and careers in cybersecurity and other STEM (science, technology, engineering and mathematics) disciplines. Much like prior findings, CyberPatriot participants are pursuing STEM education and careers at rates far higher than the national average, and the large majority of these students (85%) attribute their decisions to their participation in the program.

Click here to view the full Alumni Report for 2020

New and improved version of CyberGenerations has arrived!

CyberGenerations -- the Senior Citizens' Cyber Safety Initiative -- is designed to equip senior citizens with the knowledge needed to stay protected from cyber-crimes. The program can be hosted as a workshop for small or large groups, or it can be completed individually through the use of a self-paced guide. All resources are available free of charge and be downloaded directly from our website.

From Our Sponsors

We'd like to share with you digital resources from FUTURE U, a program partnership between Boeing (CyberPatriot Diamond Sponsor) and Discovery Education. The FUTURE U website includes ready-to-go STEM activities, including:

Innovating the Future Virtual Field Trip

This virtual field trip (VFT) takes students to Johnson Space Center in Houston, Texas. The behind-the-scenes video tour introduces students to just a few of the amazing Boeing employees who are preparing to write the next chapter of space history with the launch of the CST-100 Starliner spacecraft and the deployment of the Space Launch System (SLS). A Pre-Virtual Field Trip Companion Guide introduces students to topics they will encounter during the VFT (Length: two 45-minute class periods).

Grades: 6-12

Length: 28 Minutes, 6 segments

Online Lesson Plans

Standards-aligned STEM lessons guide students as they explore key concepts in aerospace and engineering. Students can contemplate moon tourism, create a landing system for

the world's first crewed Martian-bound spacecraft, learn about NASA's citizen science projects, or design their own celestial body!

Grades: 6-8

Length: Each activity is designed for three 45-60 minute class periods. Lessons can be adapted for completion by a single student.

In addition to these FUTURE U resources, check out the 100 Days of Learning collection of lesson plans, videos, interactive media, and design challenges, all of which are intended to increase student interest and aptitude for 21st-century skills.

CyberPatriot in the News

CyberPatriot: Training the next generation of cyber defenders
by Dave Gaulin

"Training and inspiring the next generation of cybersecurity professionals is more than simply an economic imperative. It's clear that the supply of cybersecurity specialists will not meet the demand for the foreseeable future. A decision to enter the field makes economic sense: stability, compensation, job growth… it's all there. However, cybersecurity is also a vital national security priority. Whether an individual chooses to work in a commercial Security Operations Center (SOC) or serves in an intelligence or defense related cyber-role, their work and actions are vital to the security of the United States."

Photo By: GUAM News

Article Spotlight: Alexander Saber

In an article titled, Accomplished Okkodo High student headed to the U.S. Naval Academy by KUAM News, a CyberPatriot competitor is recognized for his accomplishments that led to his acceptance into the U.S. Naval Academy.

Okkodo High School senior Cadet Lieutenant Colonel Alexander Saber will be starting at the U.S. Naval Academy in Annapolis, Md., this summer but that is not the only offer he received. Saber also received appointments for the United States Air Force and the United States Coast Guard Academy Scholar Program - all prestigious program that have an acceptance rate less than 15%.

Saber's accomplishments include: MCJROTC Legion of Valor Bronze Cross Award for Academics and Military Leadership, National Honor Society Vice-President, Mu-Alpha-Theta Math Honor Society President8th place in the All-Island Cross-Country competition, Running club treasurer, Student Body Association Sergeant of Arms, and the Bulldog Battalion Cadet Commanding Officer.

[How Are Organizations Ensuring Cyber Security While Working From Home?](#)
by Gairika Mitra

"Cybersecurity teams in big corporations are watching out for social engineering attacks as miscreants rely on user psychology to trick them into doing something that serves the attacker's purpose. During a time like this, attackers can capitalize on rapid change, confusion, and, at some level, fear. At Synechron, we enhanced our security policies in relevance to the current COVID-19 situation to include remote working access management, the use of personal devices and home networks and the associated risks involved. When we procured and distributed new desktops and laptops, we ensured that these, like our existing machines, also had encrypted hard drives and other security controls before allotting to the employees. The remote work facilities through a virtual private network (VPN) were enhanced with Multifactor authorization, and host checker software to make sure the end points are checked before employees are granted access."