



THE CYBERSENTINEL

The official newsletter of CyberPatriot—AFA's National Youth Cyber Education Program

COMMISSIONER'S CACHE



Welcome to another issue of the CyberSentinel. There is a lot of important content this month, especially for those of you forming CP-X teams.

Be sure to note the article describing adjustments in the competition structure. Driven largely by feedback we have received from you, we are taking a new approach in CP-X regarding what images we are basing CP-X rounds on and how those rounds build on each other. Thanks for all of your feedback and for helping us make the competition not just bigger, but BETTER each season.

Note also an important deadline fast approaching: **Teams must register for CP-X by October 4th this year.** Make sure you don't wait to reserve your spot in the competition.

And as you all head back into another exciting year of school, be sure to note the article giving you some useful back-to-school cybersecurity tips. Or check out the cyber video game made by fellow CyberPatriot participant and competitor, Pranav Patil.

We are also very happy to congratulate and profile Red Bank Regional High School District as CyberPatriot's latest Center of Excellence.

As always, a huge thank you to Northrop Grumman Foundation and our other generous sponsors whose support make the National Youth Cyber Education Program possible.

Now, let's get ready for CP-X! Will we see your team in Baltimore in April? I hope so!

Bernard K. Skoch | National Commissioner



DATES TO KNOW

SEPT. 15	Start of Training Round
SEPT. 23	Sneak Preview (Noon-4 PM ET)
OCT. 4	CP-X Team Registration Deadline
OCT. 6	Start of CP-X Practice Round
OCT. 10	End of Training Round
OCT. 17	End of CP-X Practice Round
NOV. 2	Competitor Registration & Payment Deadline

DON'T MISS IT!

CYBERPATRIOT
National Youth Cyber Defense Competition

OCT. 4 IS THE LAST DAY TO RESERVE YOUR SPOT IN THE COMPETITION

Watch the new CP-X Video!

CHANGES TO COMPETITION, TRAINING ROUND AND SNEAK PREVIEW NEXT UP

We heard you! Based on input from coaches and mentors in the CyberPatriot IX Post-Competition Survey, some significant changes were made to this season's competition.

Middle School Round 1

Middle School coaches and mentors felt that one image in Round 1 was not enough to have their teams actively engaged in the competition. To meet the need, Middle School teams will be given an additional image in Round 1.

Building-Block Approach to Images

In the survey, seasoned and inexperienced teams had different expectations of image difficulty. To balance expectations, the competition adopted an image building-block approach to assist with progressing.

Beginning with the Training Round on Sept. 15, teams will be exposed to images that they will use in later rounds. The image difficulty will increase with each use of previously used images. The importance of the Practice Round has increased because teams will be exposed to the competition scenario. Middle School teams will receive a third Round 2 image to build on Round 1's images.

More Challenging Final Online Round

Due to the large number of Platinum Tier teams with high scores in the final online round of competition, the Platinum Tier will have a fourth image for the first time this season. Time management will be critical in the

Platinum Tier's Semifinals.

Cisco Networking Challenge

Middle School respondents to the survey indicated that their teams were distracted by the State Round's unscored practice module. This season's State Round will not have an unscored practice module. Training will be available for teams wanting to train outside of the competition round.

Training, Sneak Preview & Practice Rounds

- Training Round: Sept. 15—Oct 10. Answers will be provided.
- Sneak Preview: Sept. 23, Noon—4:00 PM ET
- Practice Round: Oct. 6—17

RED BANK REGIONAL HIGH SCHOOL DISTRICT



Congratulations to Red Bank Regional High School District on being named the eleventh CyberPatriot Center of Excellence!

RBRHS District is a comprehensive secondary institution in Monmouth County, NJ, that offers a wide array of academic and extra-curricular programs for students out of Little Silver, Red Bank Borough and Shrewsbury. Most unique about

RBRHS District is its academies of special studies which includes the Academy of Information Technology and Pre-Engineering program.

“CyberPatriot has opened up a world of opportunities for all of our students even outside of the specialty academies,” said Mandy Galante, longtime CyberPatriot coach. “From techies to music majors to athletes to AP geniuses, there is a spot for everyone on a CyberPatriot team to have fun and become cyber savvy. They may decide to focus on a career in technology or they may just benefit by using their cyber expertise to make their own lives digitally safe.”

Over the course of RBRHS District’s eight-year involvement in CyberPatriot, team coaches have coordinated with AFA NJ leadership to host a “How to Start a CyberPatriot Team” workshop, and they continue to respond to requests for start-up assistance from new coaches in and outside of the state. Additionally, the District has made efforts to improve diversity in its teams by participating in STEM summer programs that directly target recruitment of females, African-American and Latino students.

RBRHS District has been highly successful in creating a real sense of excitement around the CyberPatriot program through recognition at Board of Education meetings, Town Council meetings, recognition from the County Freeholders, and congratulatory visits from the Lt. Governor. This type of support inspires more students to view CyberPatriot as a competitive activity that provides rewards similar or equal to those of varsity sports.

For more information on Red Bank Regional High School District and CyberPatriot's Center of Excellence program, visit <http://uscyberpatriot.org/about/centers-of-excellence>.

BACK-TO-SCHOOL CYBERSECURITY TIPS

As summer winds down and a new school year begins, take a moment to refresh your memory on how to protect your privacy while on the go. Here are some basic steps you can take to ensure you are safeguarding your personal information (source: DHS Stop.Think.Connect):



Lock your device when you're not using it. Use a strong password, pin or biometric lock to secure your device.



Don't broadcast your location. Location or geo-tagging features on social networks are not the safest feature to activate. You could be telling a stalker exactly where to find you or telling a thief that you are not home.



Enable your privacy settings on social networks so you can limit what you share with whom.



Don't overshare! Be mindful of the content you post online and the potential consequences it could have later.



Tell all your friends about CyberPatriot! After all, it really IS the coolest cybersecurity competition around!



Face off with real-life cybersecurity scenarios in 14-year-old Pranav Patil's original game design, *Cyber Champion*. After participating in CyberPatriot, Pranav was determined to educate others on the vulnerabilities of the cyber world.

“I wanted to create a fun and simple way for kids to learn how to be safe online,” explains the student from San Diego, California. By combining classic platformer gameplay with a choose-your-own-adventure style

narrative, *Cyber Champion* captured the High School Games for Change title in the [2017 National STEM Video Game Challenge](#).

For the full article about Pranav's success, [click here](#).

Coaches' Corner

- **CyberPatriot X Registration is OPEN.** All current coaches who plan on participating in the CyberPatriot X competition season (2017-2018) must re-create their teams for the new season. CP-IX rosters have been removed from the volunteer dashboard. You will be assigned a new team number for the CP-X season upon re-registering. [Click here](#) for full registration instructions.
- **Registration Fees.** The registration fees for CP-X are as listed below:
 - High School: \$205/team
 - Middle School: \$165/team
 - CAP/JROTC/NSCC: Waived
 - Title I Schools/All-Girls Teams: Waived upon request

SPOTLIGHT: SPONSOR SUPPORT

CyberPatriot Prepares Students to Protect the Digitized World: How Cisco Supports CyberPatriot by Cindy DeCarlo

Cisco's initial involvement in CyberPatriot began when volunteer engineers built a local area network for the CyberPatriot IV National Finals in March 2012. Based on that experience, Cisco approached AFA to suggest that while the desktop-based competition presented a good opportunity to expose students to broader challenges in the cyber world, as the number and variety of connected devices increases, so do the number of potential cyber threats.

Cisco asked to incorporate networking fundamentals into the competition to give students knowledge to protect desktop computers and newer mobile devices against cyber attacks. Being a career IT guy himself, Bernie Skoch was thrilled with the idea, and Cisco components were integrated into CyberPatriot. Cisco's role and content has grown in subsequent competition seasons.



After the first exhibition, there was also tremendous enthusiasm for the Cisco curriculum, which leverages tools developed for the [Cisco Networking Academy program](#). This enthusiasm was a springboard to establish the Cisco Networking Challenge as a key component of the National Finals, complete with trophies for the top teams.

Cisco also supports CyberPatriot by encouraging employees to volunteer, and then supporting them through Time2Give. Last year, more than 100 Cisco employees were involved with CyberPatriot, acting as mentors and teaching students about networking security skills both onsite at local middle schools and high schools and through Cisco WebEx. Cisco employees (or anyone interested in getting involved) can [sign up as a CyberPatriot volunteer](#).

In a recent survey of CyberPatriot graduates by the AFA, 80 percent of respondents indicated they will pursue a two- or four-year degree and plan to study cybersecurity, computer science, or another STEM field; the national average is 13 percent. Cisco's support and Cisco employee volunteers are helping CyberPatriot impact future generations, giving them valuable knowledge and tools that will prepare them to defend against the growing number of cyber threats.

Source: [Cisco Blogs](#)

Dr. Paul Kaminski earns CyberPatriot Order of Merit for work as Board of Advisors Chairman

On Aug. 23, Dr. Paul Kaminski (right) was recognized as the fourteenth Order of Merit recipient for his outstanding work as Chairman of the CyberPatriot Board of Advisors. Throughout his time as Chairman, Dr. Kaminski has been directly and indirectly responsible for the growth of the CyberPatriot program through his leadership and consistent effort to gather outside support for CyberPatriot initiatives.



AT&T Renews Cyber Diamond Sponsorship

For the seventh consecutive year, AT&T is supporting CyberPatriot at the Cyber Diamond Level.

"AT&T is proud to again be a Cyber Diamond Sponsor. We have a continuing demand for cyber experts and leaders. At AT&T, we secure more connections than any other communications provider in North America. We are excited to team up with CyberPatriot in developing those leaders," said Colonel (USAF, Ret) Lance Spencer, AT&T Director for Air Force Strategy and Solutions.

The check was presented to AFA President Gen. Larry Spencer (USAF, ret.) (left center) by AT&T employees Lance Spencer (center) and Rocky Thurston (right-center). Joining them was CyberPatriot staff members Rachel Zimmerman (left) and Commissioner Bernie Skoch.



CYBERSPORTS — KEEPING THE RALLY GOING

WRITTEN BY TRENT BRISCOE, CYBERPATRIOT INTERN

When you think of tennis, what do you think about? Whatever your initial reaction when may be, it is most likely not cybersecurity. However, beneath the surface, the two go more hand in hand than one would think.

Every year, hundreds of athletes travel to London, England to participate in arguably the most prestigious tennis tournament in the world, Wimbledon. While the athletes partner with the tournament to hopefully win matches and take home the trophies and money, there is an equally important partnership that keeps tennis players on the court and fans on the edge of their seats. This partnership is between Wimbledon and its long-term tech partner, International Business Machines Corporation (IBM).

As technology has improved over the years, it has been infused into the sport of tennis. Tennis is now using computers and advanced technology for instant replay, to keep track of the scores, to inform fans of results and to broadcast its matches for a world-wide audience. With an increased reliance on technology comes a greater risk that a serious cybersecurity breach could all but shut down the tournament.

During this year's Wimbledon Championships, 200 million cybersecurity events were detect-

ed, resulting in 3.5 million different attack signatures, according to Infosecurity Magazine. The magazine further stated that the number of website views increased to 436 million views this year, up 10% from the previous Wimbledon Championships in 2016.

Wimbledon's partnership with IBM relies on IBM's supercomputer Watson for cybersecurity to analyze threats that arise and provide analysis on the nature of the threat. Brian Jensen, the Site Reliability Engineer for ibm.com, stated that the use of Watson allowed the Wimbledon security team to get "a head-start in figuring out the scope of the problem." The cybersecurity team was then able to best solve the problem at hand.

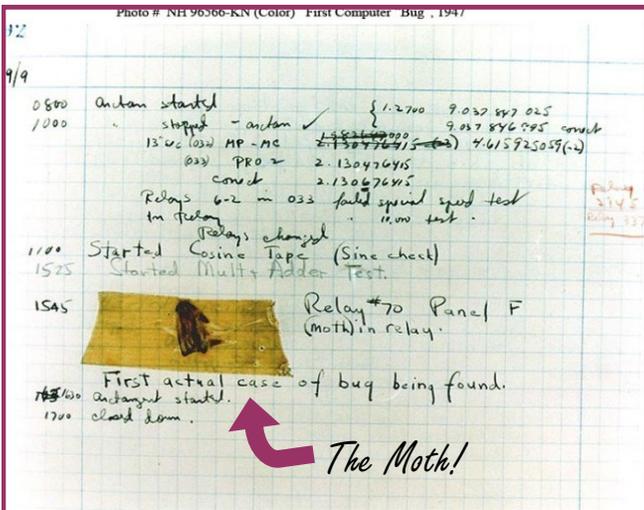
While 200 million is a surprisingly large number of cybersecurity events, Jensen mentioned that most were not attacks targeted at Wimbledon, but rather they were "compromised machines across the internet, botnets scanning for vulnerabilities." However, the reaction to the scans and any attacks are critical.

In fact, according to a blog posting by IBM employee Jonathan Van Houten, there was one coordinated attack at Wimbledon that managed to stay under the radar for a period of 10 minutes by employing a special denial-of-service method that was not actually meant to



decrease the availability of the Wimbledon platform. This allowed it to remain undetected as cybercriminals hid within a massive stream of log data and attempted to employ tactics such as malware injections. Watson, however, recognized the log data pile-up and informed cybersecurity personnel of the issue, allowing them to thwart the coordinated effort.

This is just one example of how cybersecurity is a field of growing importance throughout the world and how CyberPatriot training can prepare someone to defend a number of fields ranging from sports to national defense to personal computers. So the next time you're watching your favorite sporting event or television show or even performance on TV, be sure to think about all the ways current cyber heroes are making a difference in the world.



THIS MONTH IN CYBER HISTORY

Sept. 9, 1947 — Computer bugs aren't a new 21st century problem. In fact, they are more common and more literal than you would think. The first instance of an actual computer bug being found is said to be at 3:45 p.m. on Sept. 9, 1947. It was then that Grace Murray Hopper, American computer scientist and one of the first programmers of the Harvard Mark I computer, recorded the bug in her log book as she worked on the Harvard Mark II. The problem was traced to a moth stuck between a relay in the machine, which Hopper duly taped into the Mark II's log book with the explanation: "First actual case of bug being found." (pictured on the left)

So next time somebody has to debug their computer, it might be as analog as grabbing the fly swatter!

For more information, visit:

<http://www.computerhistory.org/tdih/September/9/>

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Microsoft Imagine X

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