THE CYBERSENTINEL

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

COMMISSIONER'S CACHE

Are you ready? I hope so, because CP-IX is almost here! The Program Office is busy with image creation, registration, putting the finishing touches on (subtle) improvements to the CP-IX Rules Book, and doing everything we can do to make this season the best ever. We are excited and we hope you are too, as we all pursue another season that will culminate with 28 teams advancing to the National Finals Competition next April in Baltimore.

We are also collecting data on the completion of another OUTSTANDING summer of AFA CyberCamps. An amazing 83 camps were hosted around the country, and the feedback has been overwhelmingly positive. And as we hope you have seen, we just released this past week v2.0 of CyberPatriot's Elementary School Cyber Education Initiative which for the first time features Mac OS X compatibility. Our special thanks to our generous sponsor Riverside Research for again funding ESCEI.
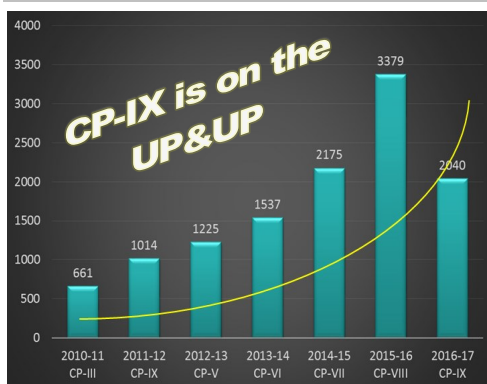
CyberPatriot is booming, and we know it is due to support from the Northrop Grumman Foundation, from our other generous sponsors, from educators, from parents, from civic leaders, from AFA Chapters, and of course from the many students who participate. Thanks to all of you!

Bernard K. Skoch | National Commissioner

DATES TO KNOW

SEPT. 7	Introductory Image Released
SEPT. 13	Coaches Meeting
SEPT. 17	CP-IX Sneak Preview (Images)
OCT. 5	Team Creation Deadline
OCT. 11-25	CP-IX Practice Round
NOV. 2	Competitor Registration &
	Reg. Fee Payment Deadline

CP-IX is on the UP&UP

Bar chart values:
- 2010-11 CP-III: 661
- 2011-12 CP-IX: 1014
- 2012-13 CP-V: 1225
- 2013-14 CP-VI: 1537
- 2014-15 CP-VII: 2175
- 2015-16 CP-VIII: 3379
- 2016-17 CP-IX: 2040

CP-IX PREPARATION OPPORTUNITIES AND COMPETITION CHANGES

Preparation opportunities and an overview of competition changes are listed below. Coaches will be notified by email of the preparation opportunities before they occur.

Introductory Images
Beginning Sept. 7, registered teams will receive access to introductory images with answer keys. The images will have basic vulnerabilities and will provide teams with the opportunity to experience a competition image in a non-competition environment. The images DO NOT count toward placement. The images will be released in the following order approximately two weeks apart: Windows 7, Server 2008, Ubuntu 14

Sneak Preview (Images)
Saturday, Sept. 17, will be the CyberPatriot IX Sneak Preview. From 12:00 pm -4:00 pm ET all registered teams may participate to test drive the new competition software.

Training Videos
Registered coaches and mentors will be able to access new training videos on the Volunteer Dashboard when they log in to the CyberPatriot website. The videos demonstrate concepts from five training modules.

Middle School State Round
The Middle School Division's new State Round will be the third qualification round.

Cisco Networking Challenge Additions
New additions to the Cisco Networking Challenge are:
- High School Round 1 Cisco Networking Challenge.
- Middle School Semifinals Cisco Networking Challenge.
- Packet Tracer 7.0 will be the initial Packet Tracer software used for the competition.

Login Information on Dashboard
This season, login information will be included on the Coach's Dashboard on the CyberPatriot webpage. Included will be Unique Identifiers and Cisco Networking Challenge login information. Image passwords will be emailed.

Rules Change Highlights
Some rules changes this season are:
- Middle school-High school composite team
- Teams may not change divisions after the first competition window begins in Round 1.

Air Cards
AT&T has donated over 300 air cards for this season's competition. A survey will be emailed to coaches in October, after registration closes. The survey will ask for requirements and justification to determine air card distribution.

SAY "HASTA LA VISTA" TO DISEASE

New replaces old—such is the way of life. For the past two decades, the world has seen an exponential increase in the number of advances in the computer technology field. In the span of about thirty years, computers have gone from filling an entire room with a few kilobytes of data to the size of your thumb with almost a terabyte (10^9 times more storage!). Yet, one of the most elusive goals of the computer industry is to develop an Artificial Intelligence, or AI, that can understand and respond to the natural language spoken by humans. Such a computer would need to have an extremely advanced understanding and be able to cope with an absurdly wide array of varied situations.

IBM created a system back in 2008 that was meant to tackle this problem. This system, dubbed "Watson" in honor of IBM's first CEO Thomas Watson, began as a project to defeat Jeopardy's best champions across the years. By February 2010, Watson could consistently beat the best humans the world had to offer.

Even though Watson was leagues above any of his contemporaries, it didn't immediately solve the long-acknowledged problem that computers have trouble transferring their ability to outwit humans in activities like chess or Jeopardy to practical applications. However, that officially changed on Aug. 8, 2016 when Watson correctly pinpointed a rare form of leukemia in a 60-year-old Japanese woman.

This woman, who was being treated by University of Tokyo doctors, had been sick for months. Her doctors had been treating her for an entirely different form of leukemia since she came in, but it was having very little effect. In a last ditch effort, her doctors put their hope in IBM's supercomputer and were rewarded with a correct diagnosis.

The mere fact that a computer can diagnosis a patient that doctors are unable to treat means that the world is on the precipice of a medical revolution. That, combined with new gene therapy techniques, means that no ailment will go undiscovered and no disease will remain untreatable. Within as little as the next few decades, we could be looking at a world where Artificial Intelligence eradicates disease as we know it.

This is a far cry from the apocalyptic view of a robot and computer dominated society portrayed by many movies in the past thirty years. While we may not be quite to the point of curing disease across the globe, IBM's Watson may just be the right AI to start the process.

Source: http://www.healthcareitnews.com/news/ibm-watson-pinpoints-rare-form-leukemia-after-doctors-misdiagnosed-patient

By Will Henry Mullins, CyberPatriot Intern

SPONSOR PROFILE: AMU

Welcome American Military University, the newest CyberPatriot sponsor!

Part of accredited American Public University System (APUS), is the number one provider of higher education to the US armed forces, offering 200+ career-relevant degree and certificate programs that help prepare students for leadership roles both within the military and for transition to post-military careers. Founded in 1991 to educate those who serve, AMU today caters to adult learners in both the military and public service communities who share a common motivation for continuing their education and preparing to reach their career potential.

"We're proud to partner with the Air Force Association to support the success of the CyberPatriot program," said John Aldrich, vice president of military, veterans & educational partnerships for American Public University System. "Our organizations share a commitment to providing a robust educational experience grounded in practical, real world applications to help ensure that students are best equipped for career success."

For further information, visit www.amu.apus.edu.

Coaches' Corner

- **CyberPatriot IX Registration**. Don't delay! Team registration for the upcoming season of competition (CyberPatriot IX) is open through Oct. 5, 2016! Returning coaches should log in with their current username and select "Create Team" to complete a team application. New coaches must first create a volunteer account. A single coach may register up to five teams.

- **Coaches Meeting.** The September Coaches Meeting will be held Sept. 13 from 9:00-5:00 p.m. Eastern in a WebEx chat room. It is a time for Coaches to ask questions of the Program Office Staff. To join the Coaches Meeting click here.

Final Season for 32-Bit Host Computer OSs
This season will be the last season for teams using 32-bit host computer operating systems. Teams with computers still running 32-bit operating systems must upgrade to 64-bit host computer operating systems for next season.

VMWare Player 6.0.7
VMWare Player 6.0.7 is the OFFICIAL virtual machine player for CyberPatriot IX images. Other players are not supported. Use of unsupported players is permissible, but at the risk of the user. Issues stemming from the use of an unsupported player is not grounds for an appeal. In any case, software rules apply to unsupported players.
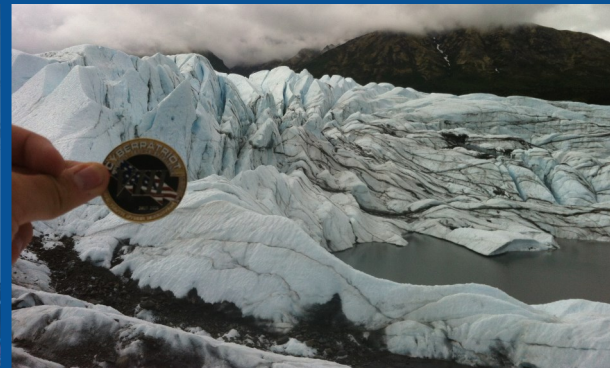
Questions?
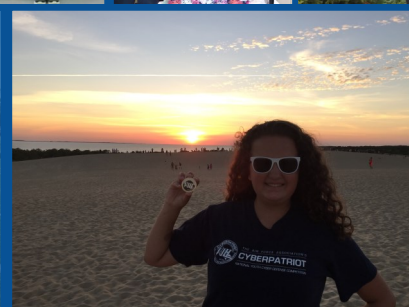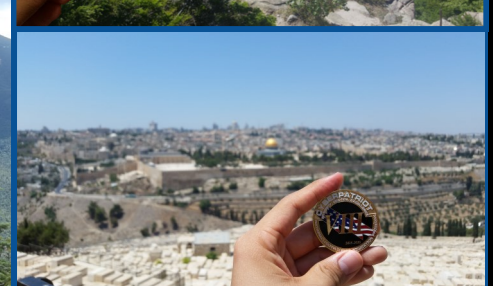*Please contact cpoc@uscyberpatriot.org*

SPOTLIGHT: #CyberPatriotAroundTheWorld

WOW! OUR CYBERPATRIOT COMPETITORS HAD A BUSY SUMMER ALL OVER THE WORLD! **#CYBERPATRIOTAROUNDTHEWORLD WINNER WILL BE ANNOUNCED IN NEXT MONTH'S NEWSLETTER!**

CYBERPATRIOT ANNOUNCES NEW SUPPORT OPPORTUNITIES

The Air Force Association's CyberPatriot program has seen tremendous growth since its creation in 2009. Since its start the program has gone from a small cyber defense competition for high school students to a full-spectrum K-12 cyber education program, having reached an estimated 85,000 students across the United States, Canada, and beyond.

We are grateful for the generous contributions of our sponsors and other organizations who continue to make significant monetary and in-kind investments in improving STEM and cyber education through their support of AFA's CyberPatriot program.

As we have continued to expand, we have heard from small businesses and individuals who do not have the means to achieve full corporate sponsor status but who nonetheless would like the opportunity to support and be recognized as benefactors of the program.

We are therefore pleased to announce two new categories of CyberPatriot support.

"CyberPartner" - $5,000
This level of recognition is focused on small businesses or philanthropists who are unable to reach the existing CyberSilver sponsorship status but who wish to support the program at the $5,000 level or above. Benefits include:

- Recognition on CyberPatriot Website
- A high-quality "CyberPartner" plaque suitable for display
- Coverage in CyberPatriot's monthly e-newsletter – *The CyberSentinel*
- An invitation for a representative to the Competition Season Kickoff Event
- A ticket to National Finals Competition Awards Banquet

For individuals, we are pleased to announce the creation of three tiers of individual **"CyberPatron"** giving to CyberPatriot, at the **$100, $500, and $1,000 levels.**

CyberPatron Gifts	$ 100	$ 500	$ 1,000
Baseball Cap	X	X	X
Tie Pin + Necklace Set		X	X
Laptop Bag + Polo Shirt			X

Becoming a supporter of CyberPatriot is easy. Visit https://secure.afa.org/joinafa/donate.aspx and select "CyberPatriot" as the program you wish to support. Donations to CyberPatriot are also applied toward the AFA Wings Society.

Security Showdown 2

ESCEI 2.0

THREE NEW MODULES

Level Select
Level 1: The Desktop
Level 2: The File System
Level 3: The Internet
Level 4: Personal Information
Level 5: VPNs
Level 6: Malware
Level 7: Firewalls

REQUEST YOUR COPY TODAY!

THIS MONTH IN CYBER HISTORY

September 2012 — Four years ago, on September 19th, 2012, the banking industry fell victim to a high amount of Distributed Denial of Service attacks and was essentially destroyed for an entire day. Cyber attackers targeted large banks such as Bank of America, JPMorgan Chase, Wells Fargo, U.S. Bank, and PNC Bank.

These Distributed Denial of Service attacks, known more commonly as "DDOS" attacks, essentially overloaded each individual system by requesting large amounts of information by using a significant number of computers known as a "botnet." Botnets are becoming easier to obtain as cyber skills become easier to learn, but the sheer volume of this attack sets it apart from any other DDOS attack in recent memory. "The volume of traffic sent to these [banks] is frankly unprecedented," said Dmitri Alperovitch, who is the co-founder of a security firm that investigated the attacks. "It's 10 to 20 times the volume that we normally see, and twice the previous record for a DDOS attack."

The US concluded that Iran was behind the attack—prompting an increased understanding of the need for competent cyber security professionals.

For more information, visit:
http://money.cnn.com/2012/09/27/technology/bank-cyberattacks/