Air Force Association's
CYBERPATRIOT
National High School Cyber Defense Competition
presented by NORTHROP GRUMMAN Foundation

Issue 0016
June 2013

The CyberSentinel

Commissioner's Cache

CyberPatriot Coaches and Mentors are TERRIFIC, and the Air Force Association wants to recognize them for their commitment to improving STEM education in America. Accordingly, AFA will award "CyberPatriot V Coach of the Year" and "CyberPatriot Mentor of the Year" awards at the Air Force Association's 2013 Air & Space Conference and Technology Exposition in September. The National Championship coaches from each division will be awarded their Division's Coach of the Year Award, while the divisions' Mentors of the Year will be selected from among registered National Finalist Mentors. CyberPatriot VI is shaping up to be as competitive as ever with nearly 600 teams already registered. For our registered teams, Exhibition Round 2 will begin on July 15 and Exhibition Round 3 will follow at the end of August. Watch the CyberPatriot website, Facebook page, and Twitter for details. Finishing the month, we begin the CyberPatriot Middle School Program with a pilot at the Los Angeles Unified School District. As we move further into the summer, we will keep you posted on more CyberPatriot activities and look forward to your ideas making CyberPatriot even bigger and better!

Bernard K. Skoch
Commissioner
CyberPatriot Program

Program Office Bits

CyberPatriot VI Coach Registration Is Open!

Go to: www.uscyberpatriot.org

- **Northrop Grumman Internships**— See the link below: http://careers.northropgrumman.com/cyberpatriot.html
- Follow us on Facebook at www.facebook.com/CyberPatriot and on Twitter @CyberPatriot

An International Exhibition team from Sisler High School in Winnipeg, Manitoba, Canada, competes at the CyberPatriot V National Finals.

Google Plans Next Generation of Facial Recognition Security Technology

Most people, even those with minimal education and training in cybersecurity, know the importance of using passwords to keep information safe. To be secure, passwords must be complex and unique. Yet despite this understanding, it is sometimes difficult to make passwords that are both strong enough to defend against any real unauthorized attempt to enter a system and easy enough to remember.

Facial recognition has been proposed as an easier and more secure method of keeping data safe, but this too has downsides. Many of today's facial recognition security measures can be thwarted with still photographs of a user's face.

This month, Google filed a patent to combine the benefits and eliminate the downsides of facial recognition software and traditional passwords. This new technology, which has yet to be named, would require users to make a unique facial movement to gain access to their data.

The list of gestures recognized by Google's new technology includes blinks, winks, ocular movements, smiles, frowns, tongue protrusions, open mouth movements, eyebrow movements, and forehead and nose wrinkle gestures. Users would only need to make one of these unique gestures in front of their computer's camera to gain entry, but as the technology improves, users may be able to initiate an entire sequence of movements as an added security measure.

Additionally, Google's patent aims to thwart the method of using facial photographs to bypass security by incorporating a "glint detection mode" laser that would be able to differentiate between a picture and an actual human being.

It remains to be seen how soon Google's new technology will be rolled out to the public, but like all new technologies, users may have to deal with a few bugs. Don't be surprised if you start seeing lots of frustrated people making funny faces in the coming months.

Source: http://www.theatlanticwire.com/technology/2013/06/google-password-future-goes-

Features

Days until Exhibition Round 2:

17

Research Indicates iPhones at Risk of Charger-Based Threats

It is no secret that today's mobile phones are just as vulnerable to cyber attacks as laptops and desktop computers. Indeed, they are basically handheld computers that can be just as easily hit with viruses and other forms of malware. While Apple products have generally been an exception to this rule, this may soon change in an unexpected way.

Next month at the Black Hat information security conference in Las Vegas, researchers from Georgia Tech will demonstrate a method of breaking into an iPhone or iPad through a charger.

Until now, Apple products have been less likely to be hit by attacks for two reasons. One is that they are less commonly used in business and government environments, and thus lack the potentially valuable, sensitive information found on products with a Windows or Linux operating system. Second, Apple products—especially mobile devices—run only apps and accessories approved by Apple. Thus, users are less likely to download malicious software than they would be if they owned a smartphone that allows outside applications.

Yet, the Georgia Tech team argues that these security features are not enough. The description for their presentation states: "Despite the plethora of defense mechanisms in iOS, we successfully injected arbitrary software into current-generation Apple devices running the latest OS software." It also boasts that this software can penetrate a mobile Apple device in under a minute.

It is unclear at this time whether the team is using a modified version of the authentic Apple charger or a modified charging device. Either way, if the team's claims are true, Apple users will have to be much more concerned about their overall cybersecurity posture.

Source: http://www.cnn.com/2013/06/03/tech/mobile/hack-iphone-charger/index.html)

Transition

CAP 1st Lieutenant Scott Anderson, CyberPatriot Coach for the Greenville Composite Squadron, South Carolina, died suddenly during the evening hours of June 14, 2013. Lieutenant Anderson has been an active supporter of the CyberPatriot Program since he coached the Squadron's first team during CP-II. Since then he worked actively involve other units and school groups in the upstate South Carolina area in CyberPatriot. At the time of his death Lieutenant Anderson was hard at work preparing a CyberPatriot team for the fall competition season. A graduate of the University of California at Berkley, he was as fascinated with hardware as he was the security side of information technology He personally built a working network for his Squadron and helped several other units to get "on their feet" using donated equipment, which he rounded up. Lieutenant Anderson was the father of three children, two of whom competed in CyberPatriot II before going on to college. Lieutenant Anderson had been a member of CAP since 2007 and reached the level of "Master" in the CAP's IT Professional Development program.

CyberPatriot Welcomes:

Symantec

As Its Newest CyberGold Sponsor!

Coaches' Corner

- **Exhibition Round 2.** The next Exhibition Round will take place between July 15 and 24, 2013. The purpose of the Exhibition Round is for teams to introduce CyberPatriot to their communities and familiarize new competitors to the CyberPatriot Competition System. The image can be used multiple times during the Round. Introductory training sessions will be conducted during the Round. Tech Support will be offered between 9:00 a.m. and 5:00 p.m. EDT on weekdays. More information to follow in emails.
- **CyberPatriot VI Coach Registration.** CyberPatriot VI Coach Registration began on April 1, 2013. Coaches must be *registered and cleared* before their teams may register. Go to: www.uscyberpatriot.org to register.
- **July Online Coaches' and Mentors' Meetings.** Three online meetings will take place during the following dates in July. Note that Coaches' and Mentors' Meetings now have a new format. The first two meetings will be more slide-intensive with a short question-and-answer section afterwards. They will be geared more toward newer Coaches and Mentors. The third meeting will have minimal slides and answer significant questions for Coaches and Mentors of all experience levels. Information on how to join these meetings will be emailed to all registered Coaches and Mentors at the beginning of July. Below is the July Online Coaches' Meetings schedule.

  - July 9—3:30 pm EDT/2:30 pm CDT/12:30 pm PDT
  - July 10—4:30 pm EDT/3:30 pm CDT/1:30 pm PDT
  - July 10—9:00 pm EDT/8:00 pm CDT/6:00 pm PDT

  (This meeting will have the more extensive question and answer session.)

The CyberSentinel

Publisher
Bernard K. Skoch

Editor
Francis S. Zaborowski

Assistant Editor
Ryne Smith

CyberPatriot Program Office
1501 Lee Hwy Arlington, VA 22209
www.uscyberpatriot.org

Spotlight on Colorado

Life After CyberPatriot

By Bill Blatchley, Colorado Springs Cadet Squadron Coach and Mentor

After graduating from high school, what does a former CyberPatriot Competitor do? For three cadets from the Colorado Springs Cadet Squadron—Simeon Blatchley, Thomas Jessop, and Chris Vasquez—the answer to that question is that they used their new cyber skills to help other teams, work hard in college, and land some great jobs.

During CyberPatriot IV, Blatchley and Jessop worked as Assistant Coaches for the Colorado Springs Cadet Squadron team while Vasquez was Team Captain. Their skills, along with those of other team members, helped lead the Wolfpack to claim the Commander-in-Chief's trophy that season.

Having gained valuable teaching experience during CyberPatriot IV, the cadets decided to take their knowledge to other teams during CyberPatriot V. Blatchley, who entered Red Rocks Community College in Lakewood, Colorado, to study computer and network security, used his CyberPatriot experience to help the Warren Tech High School CyberPatriot team. Between his classes, he instructed Competitors on methods for securing Windows and Linux systems and cryptography standards. His mentorship was so exemplary that Warren Tech's computer science teacher asked him to continue instructing juniors and seniors through the end of the school year. During this same time, Blatchley collaborated on a Linux best practices document for the SANS Institute. It can be found at www.sans.org, .

Jessop acted as a CyberPatriot V Mentor for Falcon and Air Academy High Schools in the Colorado Springs area while majoring in computer security at the University of Colorado at Colorado Springs. In addition, he competed in several college-level cyber competitions.

While attending Colorado State University and studying computer science, Vasquez joined the Thompson Valley CAP Squadron in Fort Collins, Colo., as a team mentor on top of his mentor duties at his former high school, Vista Ridge. His knowledge helped both teams secure spots in the CyberPatriot V Semifinals. Vasquez found that these experiences helped him with his own studies, as cadets often requested additional homework assignments. By researching topics for them, he also learned more himself.

This summer, Blatchley will be providing tech support and working on special projects at Urban Lending Solutions. Jessop will work for Lockheed Martin in Colorado Springs for his second summer, gaining valuable network engineering and information assurance experience. He thanks the CyberPatriot program for inspiring him to become involved in cybersecurity. Vasquez will be working as an intern for Whiting Petroleum in Denver and learning more about the installation and configuration of cloud-based servers and Cisco networking.

Opportunities abound for motivated CyberPatriot alumni. The foundational experience they gain while participating in CyberPatriot gives them a head start over many of their peers in college. *Have you got what it takes?* If so, share it with others. Each of these former Colorado Springs Cadet Squadron team members has learned more by sharing their knowledge than they did while being a Competitor. Be like them and don't sit on the sideline after you graduate from high school.

Falcon High School Making Headway in CyberPatriot Competition

By Thomas Russell, Falcon High School Coach

Falcon High School recently received an award for from the President of the local Air Force Association organization for placing third in Colorado's Open Division rankings. This was the first year that Falcon High School competed in the CyberPatriot Competition, but it was not easy. We did not have computers initially, but were able to purchase laptops later, thanks to a Falcon Educational Foundation Grant. Additionally, we were able to improve our network connection by purchasing a network hotspot instead of using air cards or our school district's network. This gave us the flexibility we needed to be competitive, as students were able to take the computers home and practice seven days a week.

The Falcon High School team, from left: Steve Cruz, Anne Henselman, Chloe Liwanag, Beau Curnow, and Heinkel Beaudreau.

After a slow start, the computers and hotspot paid off as our CyberPatriot team met every day to discuss network security methods, vulnerabilities, and defense strategies. Members of the team worked hard by studying in class and during their free time. They shared information with other team members and worked together for a common goal. This teamwork was the basis of their success.

With the success of this year's team and a surge in interest and enthusiasm, Falcon High School plans to move into the national Competition spotlight for the upcoming CyberPatriot season. Dozens of new students have already expressed an interest in participating in CyberPatriot VI, and Competitors on last year's CyberPatriot team produced a recruiting video, which can be found at http://youtu.be/zv5aY4kmNns, to promote the program at our feeder middle schools. With the proper guidance and inspiration, I am confident that our Competitors – both new and old – have the will and dedication to reach their goals next season.

Colorado and CyberPatriot: The Facts

- **CyberPatriot V State Champions:**
  - Open: High lands Ranch High School—Highlands Ranch, Colorado
  - All Service: Colorado Springs Cadet Squadron— Colo rado Springs, Colorado (CAP Best in Service Award Recipients)
- **Participation Per Year:**
  - CyberPatriot II: 5
  - CyberPatriot III: 25
  - CyberPatriot IV: 32
  - CyberPatriot V: 43
  - CyberPatriot VI: 17 (so far)
- **CyberPatriot IV Commander-in-Chief's Cup Champions:**
  - Colorado Springs Cadet Squadron—Colorado Springs, Colorado

Announcing the CyberPatriot Summer Twitter Challenge

Dear CyberPatriot Competitors, Coaches, Mentors, Fans, and Supporters:

We currently have 945 followers on our Twitter account. We deeply appreciate all of the social media support you've given us so far, but doesn't **1,000** sound like a much better number? We certainly think so, but we need your help to get there. We know the prospect of hitting a four-digit number is exciting for all of you, but as an added incentive, we're giving away prizes.

Entry is easy. Just follow these steps:

1) Follow us on Twitter @cyberpatriot
2) Wait to see if you win

It's. That. Easy.

On August 31, we will count the number of our Twitter followers. If the number is 1,000 or above then we will give away one pair of our sweet new CyberPatriot sunglasses for every 10 followers we have above our current number of 945. Examples: If we have 1,000 followers, we will give away five pairs; if we have 1,050, we will give away 10, etc. The winners will be *randomly chosen* from our new followers by the CyberPatriot Program Office staff and will be required to provide an address to which we can ship the shades.

Keep in mind that if we do not reach the magical 1,000 mark by August 31, then no one gets a prize. So make sure you tell your family and friends and get a-followin'.

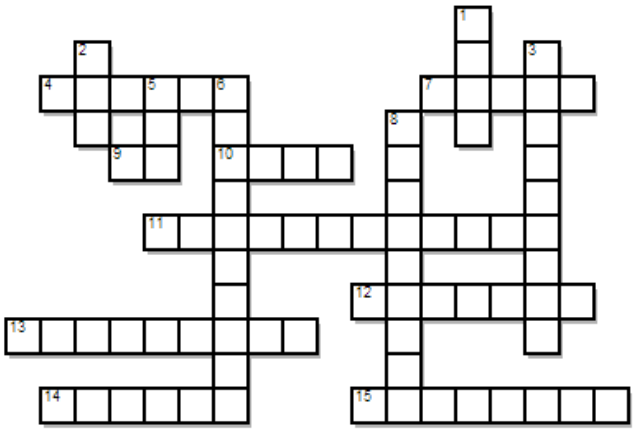
Note that this contest is for new Twitter followers, so all of our 945 current followers are unfortunately ineligible. However, these followers should not fret. There may or may not* be, in the coming months, a new Twitter contest for which all of our Twitter followers will be eligible, and that one will have even greater prizes. Look for information on the winners of the CyberPatriot Summer Twitter Challenge on our Twitter feed in early September and in the September edition of *The CyberSentinel.*

-Ryne Smith, Assistant Editor,
The CyberSentinel

*There totally will.

Your new CyberPatriot sunglasses will make you as cool as Commissioner Skoch.

Crossword Puzzle



ACROSS

4 This company recently patented a facial gesture technology
7 Sixth word of the CyberPatriot motto
9 Fifth word of the CyberPatriot motto
10 First word of the CyberPatriot motto
11 The Twitter account you should follow for a chance to win sunglasses
12 IPhones may be at risks of attacks through this
13 The name of the first calculator
14 _____ High School, created a recruiting video
15 The newest CyberGold Sponsor

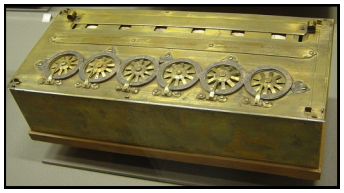
DOWN

1 Fourth word of the CyberPatriot motto
2 Second word of the CyberPatriot motto
3 Number of Colorado teams registered for CP-VI so far
5 Third word of the CyberPatriot motto
6 _____ Round 2
8 Bill _____, Coach of the Colorado Springs Cadet Squadron

This Month in Cyber History

June 19, 1623—French mathematician Blaise Pascal-he of the eponymous triangle and wager -was born. Pascal is most famous among computer scientists for his invention of the Pascaline, the first mechanical calculator. He created the device at the age of 19 to aid the work of his father, a tax collector. The Pascaline, which was about the size of a shoebox, could add and subtract and perform multiplication and division by repeating these simple operations. It was the greatest advancement in calculation technology since the invention of the abacus.
(Source: www.computerhistory.org)

For more information go to:
http://www.computerhistory.org/tdih/June/19/



Today's computers would not exist without this behemoth from the Middle Ages.