The Holiday Special Edition



Buck Buckwalter, CyberPatriot Co-Founder Retires

As CyberPatriot V begins, the depth and breadth of the competition has tripled since its inception. The competition has demonstrated a model that can excite and motivate hundreds of thousands of high school students toward a career in network security and other Science, Technology, Engineering, and Mathematics (STEM) disciplines.

But how did it get to this point? How did it come from nonexistent to international reach in less than five years?

The United States' reliance on cyber technology continues to grow, simultaneously leaving those systems we rely on every day vulnerable to disruption or exploitation. The key to cyber protection lies not just in technological advances, but also in people and education.

The idea was proposed in a meeting of AFA's Aerospace Education Council in January 2008. The meeting's purpose was to identify youth education programs with a STEM focus that AFA could support or promote. First Robotics, Project- At CyberPatriot Headquarters, ed Lead the Way, Team Rocketry and a few others all were considered. But why not build our own program? Furthermore, why not build something new? The importance and relevance of cyber security was undeniable. Combine that with the uniqueness

an even more viable option.



"It would not have happened at all without the explosion of the issue," said David T. "Buck" Buckwalter, former executive vice president of AFA. on the origin of CvberPatriot. "It answered an issue and had a wide open competitive space at first."

By September 2008, AFA's Board of Directors officially adopted the program. The same year saw cyber attacks on US oil and gas companies ExxonMobil, ConocoPhillips, and Marathon as well as the most significant cyber attack ever against the military at its time brought on by an infected flash drive put in a U.S. military laptop.

The opportunity was there, and AFA didn't hesitate to embark on the challenge.

Buckwalter was instrumental in organizing the prototype. With help from SAIC supplying their patent-pending software, CYBER-NEXS, as the platform for the competition and the CIAS at the University of Texas in San Antonio (creator of the National Collegiate of the competition space, it became Cyber Defense Competition), CyberPatriot was able to become a

reality.

"His dedication to the program has been unvielding," said Bernie Skoch, CyberPatriot Commissioner. "I signed onto CyberPatriot in 2010, and Buck had established a strong foundation for the program. Truthfully, it couldn't have reached its level of success without the energy and support he put into it in its starting years."

CyberPatriot's beginnings came in three phases.

Phase 1: The first CyberPatriot "games" took place in 2009, in conjunction with AFA's 25th Annual Air Warfare Symposium where seven Air Force Junior Reserve Officer Training Corps (AFJROTC) teams and one Civil Air Patrol (CAP) team from the greater Orlando area competed. Buckwalter and his small team created the prototype knowing that a true National Competition is a major undertaking involving a dedicated game, marketing, computer support, judges, state or local competition, national coordination, publicity, and much more. The concept demo was to give insight to if the competition could be successful in exciting youth and exposing the problems with the competition that could be easily dealt with in such a smaller, more executable venue.

No one, including Buckwalter, quite knew how well it would be received. But the enthusiasm

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Program Office Bits CyberPatriot V Semifinalists Announced! Go to: www.uscyberpatriot.org Coaches' Online Meetings: Jan 18 and

15, 2013

CyberPatriot V Semifinals: January 11-12, 2013. Back-up Dates: January 18-19, 2013.

Consolation Round: February 1-2, 2013

This Month's Question

Is my cell phone open to an attack the same way a computer is? (The answer appears on Page 4.)

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CyberPatriot to Introduce New Competition System in CP-V

CyberPatriot V will have a new competition system to complement SAIC's CyberNEXS (Cyber

Network Exercise System) which powers CyberPatriot. The CyberPatriot Competition System (CCS) was developed by CIAS for the CyberPatriot National High School Cyber Defense Competition.



The new CCS software will be introduced to competitors during the combined practice round, October 1 - 12, 2013. Then CCS will be used in rounds 1, 2, and 3.5 (Consolation Round). Round 3 (Semifinals) and the National Finals Competition will be powered by CyberNEXS.

CCS requires Internet access to report scores. Competitors will receive immediate feedback from CCS on their performance. A screenshot of the scoring report is shown to the right. Training documents for CCS will be under the "CyberPatriot Training Materials" link under the "CyberPatriot V" tab at

www.uscyberpatriot.org.

Competitors using CCS will use the same business rules as used in previous years - find and



fix vulnerabilities.

More info on CCS will presented at future coaches' meetings.



AFA President and CEO Lt. Gen. Mike Dunn (USAF, Ret.) will step down from his post on July 31st. He was a major supporter of CyberPatriot and due to his engagement and visionary leadership. CyberPatriot grew exponentially. (See Commissioner's Cache on Page 1.)

San Antonio Educator Leads Way for CyberPatriot Girls

When Southwest High School first hosted a CyberPatriot team that competed in the Open Division, Jo Ann Fey was fortunate enough be their Principal. "At the beginning it was about providing resources and removing obstacles. Over time it became a way of celebrating our student's IT passion." said Fey. The team became the highlight of conversations on campus, making its way onto faculty meeting agendas and e-mail announcements. During the morning announcements, the 1,000-plus student body received enthusiastic commentary from Fey as the team progressed through each CyberPatriot round.

The campus celebrated the CyberPatriot team from small tokens like Zebra Cakes and Dr. Pepper to establishing a way to recognize the team in a very traditional ceremonious manner in a Texas High School: Letterman Jackets. Every time a Southwest student passed an IT certification Exam (e.g., A+) they were immediately highlighted over the announcements (am, pm, even when the custodians were the only ones in the building).

Ultimately, my role was to SHARE their VOICE through my very loud voice so that excitement about CyberPatriot became contagious for students and staff. Competition day for

CyberPatriot at Southwest High School was like a are placed on them. I have found in many national title game in any sport. CyberPatriot at Southwest High School was the purest form of a team...WE learned that mistakes lead to inspiration and that working together helps us overcome challenges. Without realizing it, the kids, and the adults, experienced what "learning looks like". In the end, we did not make the final round...but at Southwest High School in San Antonio, Texas our kids WON a national title ... they proved to the nation that overcoming inertia sometimes can be the single most important catalyst to changing our lives and the world forever.

New Job/Philosophy

I was promoted to Executive Director for Student and Adult Leadership Development for Southwest ISD and in that gave up a way of life that I have relished for the past 17 years...days filled with kids. There is good news though as the position has afforded me the opportunity to impact not only every student in our district but their families and the community as well. I believe that if we provide the means, then anyone can realize success and foster that in others... cultivating a community of leaders. Students can not realize their full potential if limitations

instances that when students are allowed to create anything, given rather broad parameter, that their unique interpretations and the methods in which they communicate their understanding tends to be not only scholarly but intricate and visually captivating. The motivation and enthusiasm I am able to perpetuate through CyberPatriot I hope to extend to the students and community member in Southwest ISD. Target one: All Girls CyberPatriot Team, done!



JoAnn Fey, CyberPatriot Coach and Executive Director for Student and Adult Leadership Development for Southwest ISD

Publisher		
Bernard	к.	Skoch

Editor Francis S. Zaborowski

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Assistant Editor

CyberPatriot Program Office

Alison A. Fang Yuen

•1501 Lee Hwy Arlington, VA 22209 • www.uscyberpatriot.org •E-mail: info@uscyberpatriot.org • Telephone: 877.885.5716

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Spotlight on San Antonio



Southwest High School Fields All-Women Team By Arthur Celestin,

Exciting new developments are in the works at Southwest High School, a school of more than 3,000 students in the San Antonio metropolitan area, as the nation prepares to kick off the 2012 CyberPatriot V competition. Last year, Southwest was one of the leading teams in the city, nation, and world as they made it through all three virtual rounds of the competition and narrowly missed going to the finals by a mere three points. This year, things are getting even better as Southwest is sending not just one team into competition, but five teams of extremely talented students. However, while having numerous teams is a great new development for Southwest, perhaps an even more notable accomplishment for the school and the world is the establishment of the SWHS all-female CyberPatriot team.

"It's been both a challenge and a dream to attract as many females as possible in information technology" said team coach and instructor Arthur Celestin, a native of Haiti. "Seeing young women take interest in a field primarily dominated by males is truly inspiring."

But his passion and determination has produced a myriad of great results as more and more girls at Southwest are beginning to take an interest in the computer field. The team is made up of six girls for now but as new freshmen enter into the system, they too, are beginning to look up to these brave young women as role models.

"The computer maintenance and CyberPatriot program helps me set my goals for life and what I really want to do in the near future," said team member Shakti Castillo. And indeed, that's what she's learning to do. Today, these young women are performing complex security hardening techniques on multiple operating system platforms which is an impressive feat given that most of them joined the program with little or no knowledge. "Being a part of the Southwest CyberPatriot program and the Engineering Club has broadened my knowledge and opened up great new opportunities," said team Captain Deidre Carillo.

Southwest is looking forward to an exciting year of competition among all of their teams and hopes the new development of an all female team will serve as inspiration to aspiring females both locally and globally. With the team preparing for the first round of competition, the feeling is both optimistic and electric. As Narda Mendez, a confident team member said, "I am a very enthusiastic person, and right now I am more than excited to see how far the team's determination will take us in this competition. There is not a better place to be than Southwest High School!" Mr. Celestin would like to thank USAF Lt. Jonathan Hogan and Ricky Banda, the teams' mentors, and Digital Defense Inc. for being a pioneer of the "Adopt a School" program in the city

Southwest High School's All-Women CyberPatriot Team: Left to right: Maria Chavez Lopez, Coach Joann Fey, Vanessa Howard, Sabrina Goaetsch, Shakti Castillo, and Narda Mendez. The team's Captain, Deidre Carillo was on a college campus taking dual credits courses during the group picture. Carillo's photograh is at the right.



San Antonio is a <u>CyberPatriot</u> <u>Center of Excellence</u>. More than 50 San Antonio area teams registered for CyberPatriot V. San Antonio's Alamo Academies and MacArthur High School sent teams to the CyberPatriot IV National Finals Competition, in March 2012, with the Alamo Academies team winning first place in the Open Division.



Southwest High School CP team members with instructor/coach Arthur Celestin

of San Antonio and for supporting Southwest High School's CyberPatriot program with equipments, mentors, and internship opportunities. This is a great partnership of exceptional value for the students and the community!



Southwest High School Logo

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Answer to Monthly Question

The answer is: Yes. As cell phones have advanced, they have become less like phones and more like computers. While these advancements provide increased features and functionality, they also introduce new risks. Attackers use these advancements to target devices previously considered safe. Any electronic equipment that uses some kind of computerized component is vulnerable to software imperfections and vulnerabilities. This expands the list of susceptible devices to tablets, video games, car navigation systems and many more. If the device is able to connect to the Internet or a network, the risks increase. To find out ways to protect your devices go to: <u>http://www.us-cert.gov/cas/tips/ST05-017.html</u>.

CyberPatriot V Semifinalists

Major New Cybersecurity Flaws Found (Cont'd)

emitted from the competitors and the positive feedback from the surrounding industry professionals and senior military leaders demonstrated tangible success.

Phase 2: The key to this phase was geographic breadth and a scalable game structure that allowed broader, distributed participation. This brought in the preliminary qualifications rounds and online training materials to baseline the participants' knowledge of computer and network security. For the 2009-10 school year, CyberPatriot II increased its sample size and the competition went nationwide, accommodating nearly 200 AFJROTC/CAP units in 44 states, South Korea and Japan. The interest and enthusiasm only increased.

Phase 3: CyberPatriot III, with the support of the presenting sponsor Northrop Grumman, went to full national deployment for the 2010-2011 school, open not only to AFJROTC/CAP units, but all Service JROTC programs and all high school students -- whether public, private, parochial or home schools. And by CyberPatriot IV, the competition had more than 1,000 teams registered from all 50 states, U.S. Department of Defense Dependent Schools in Europe and the Pacific, and Canada. But the growth of CyberPatriot has been a full nationwide effort, with help from dedicated AFA members, educators and industry-leading sponsors. Generous grants from the program's presenting sponsor, the Northrop Grumman Foundation, has made national deployment to all high schools possible.

But the biggest challenge now facing the competition is maintaining the growth and relevance, Buckwalter said. Last year saw the addition of the forensics exercise, teaching and testing competitors on the field of cyber forensics through the application of crime scene analysis, evidence gathering and critical thinking. But it won't stop there. CyberPatriot demands a continual need for evolution of the program-- just as the threats in the cyber domain continue to evolve.

> CyberPatriot Poster Contest Winner

Hamza Siddiqui

