The CyberSentinel

Commissioner's Cache

CyberPatriot V is HERE! Congratulations on being part of the nation's largest and fastest growing high school cyber defense competition. The season kicks off on November 2-3 with the All Service Division Round 1. And big news! We will be using our new CyberPatriot Competition System. On November 16-17, the Open Division will have their turn to compete.

Thanks to every Coach and Mentor for your great work with your teams. You did well in the Practice Round and we look forward to seeing your teams do great in Round 1. And know this: As we move farther into the competition, the rounds will become more challenging. But we know you are up to it.

A special thanks to our Presenting Sponsor— the Northrop Grumman Foundation, for their considerable and continued support of the CyberPatriot Program.

Oh! Be sure to look thoroughly at the new *CyberPatriot Rules Book* that was just published. And as we wrap up our registration, we ask Coaches to be sure to have your Competitors completely registered so they can get credit for participating in CyberPatriot V. Good luck and have fun!

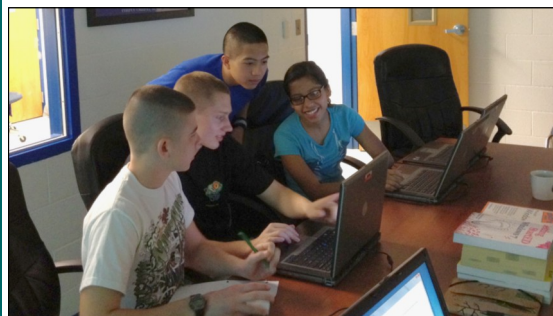Bernard K. Skoch
Commissioner
CyberPatriot Program

Program Office Bits
Competitor Registration Is Underway
Go to: **www.uscyberpatriot.org**

- *CyberPatriot V Rules Book* is online at: http://www.uscyberpatriot.org/CP5/CP%20V%20Documents/CyberPatriot_V_Rules_Book.pdf
- *Coaches' Online Meetings*: Nov. 13 and 14, 2012
- **Hurricane Sandy**. All service Division Teams affected by Hurricane Sandy may compete on Nov. 16-17. See paragraph 4020 and Appendix IV of the CyberPatriot *Rules Book* for details.

San Antonio's Douglas MacArthur High School, Army Junior ROTC team trains for CyberPatriot V. The MacArthur High School team competed in the CyberPatriot IV National Finals Competition in Washington, D.C., during March 2012.

Northrop Grumman Foundation Continues Strong Support for CyberPatriot Program

The Northrop Grumman Foundation continued its strong support for the CyberPatriot Program with a $1 million grant to the Air Force Association (AFA), marking the third year as presenting sponsor. The announcement took place at the U.S. CyberPatriot booth during AFA's 2012 Air & Space Conference and Technology Exposition in National Harbor, Maryland.

CyberPatriot, the nation's largest and fastest-growing high school cyber defense competition, was created by the AFA to inspire high school students to study science, technology, engineering and mathematics (STEM) disciplines critical to the nation's future and ultimately pursue careers in cybersecurity or related fields.

CyberPatriot V will be

Northrop Grumman Foundation President Sandra Evers-Manly presents a $1,000,000 CyberPatriot V sponsorship check to AFA Chairman of the Board George Muellner. Observing are Northrop Grumman's Diane Miller (far left) and CyberPatriot Commissioner Bernard Skoch (far right).

held during the 2012-2013 school year. Registration closed on Sept. 30. The first round of competition starts on November 2-3 and will be

followed by two more virtual rounds over four months to qualify for the in-person final competition round in Washington, D.C., in March 2013. For more about the competition, go to www.uscyberpatriot.org.

"The Northrop Grumman Foundation is proud to partner with the Air Force Association and again be the presenting sponsor of CyberPatriot," said Sandra Evers-Manly, vice president of corporate responsibility and president of the Northrop Grumman Foundation. "The company, the foundation and our employees share a mission to help improve the quality of science, technology, engineering and mathematics education from early grades through the university level.

This Month's Question

What is *SSH*?

Features

Sponsor Profile: SAIC

Defending against cyber attackers to protect a nation, an IT system, or even yourself takes a heightened level of awareness combined with technical skills. October is National Cybersecurity Awareness Month, a time to increase education and showcase industry growth, opportunities and cybersecurity skills. SAIC is a founding partner of CyberPatriot and SAIC's live-training cyber game engine, CyberNEXS <https://www.saic.com/cyberNEXS/> , powers the youth competitions with a realistic cyber environment to train and exercise the essential skills to defend a computer network, under the pressure of a real-life attacks. Cyber defense competitions are becoming a vital

path to nurture talent, sharpen cybersecurity skills, and increase education and ethics in information security.

SAIC's patented CyberNEXS has been used for over 180 training and competition events globally and recently partnered with the International Council of Electronic Commerce Consultants (EC-Council) Foundation to sponsor the Global CyberLympics <http://www.cyberlympics.org/Home.aspx>. The qualification rounds were conducted via the Internet, where hundreds of contestants from 51 countries tested their technical cyber skills; the Global Finals will be a Capture the Flag competition conducted at Hacker Halted in Miami at the end of October. CyberNEXS contains a real-time, high fidelity scoring system that is easily adaptable to changing threats

and takes participants through various training scenarios, including forensics, defensive and offensive operations. Available live anywhere in the world, CyberNEXS provides a web-based network management tool that aids in real-time feedback and focused training.

A CyberPatriot Founding Partner, SAIC's CyberNEXS team received the Air Force Association's Hoyt A. Vandenberg Award in 2010 for its outstanding support of the CyberPatriot Program.

# Cyber Crime Case Challenge Coming to CyberPatriot
By The Defense Cyber Crime Center (DC3)

The Department of Defense Cyber Crime Center is a CyberPatriot Partner. In the CyberPatriot IV National Finals Competition, DC3 conducted the Digital Crime Scene Challenge as a scored event for the competition.

The DC3 Digital Crime Scene Challenge is an interactive competition that presents teams of 2-5 competitors with a simulated crime scene and asks them to solve the case in less than 15 minutes. This hands-on challenge brings awareness to the issues that real-life cyber investigators and security professionals face. Various levels of a cyber investigative process are put to the test in this challenge:

    Analyzing case data
    Processing a crime scene
    Securing evidence
    Conducting a digital forensic examination

To win the challenge, teams needed to find the most digital devices in the crime scene, identify the device that contains vital case information based on the scenario and facts given, and locate the digital evidence on the forensic machine (provided). No previous technical expertise was required to partici-
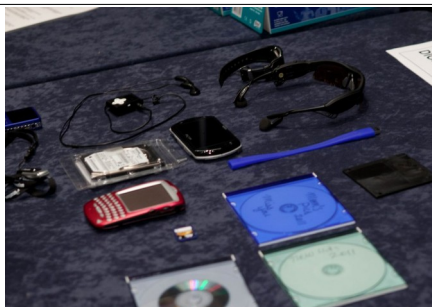
Competitors study devices to determine if they are digital or non-digital evidence.

Referring to a transcript, competitors determine which device holds the vital clue to solve the case.

pate.

The Digital Crime Scene Challenge is undergoing a major overhaul to debut this fall. The Cyber Crime Case Challenge (C4) iteration will include more elements of a Cyber Crime investigation and an updated format. We hope to see you at the CyberPatriot V National Finals Competition in March 2013.

Participants search the suspect for evidence during the CyberPatriot IV National Finals Competition.

Spotlight on Spokane Public Schools

Partnering with community mentors helps SPS find cyber success

CyberPatriot started in Spokane Public Schools (SPS) with one team of curious students and a couple of well-intentioned coaches.

This year, SPS has 10 teams from five schools, experienced students, a fleet of coaches supported by community mentors eager to share their knowledge and a Center of Excellence designation.

"Our first year of competition without mentors was ugly … let's leave it at that," remembered MSgt. Loyd Patton, Aerospace Science instructor and coach of John R. Rogers' Air Pirates team. "This wouldn't work without the mentors."

Coaches are responsible for recruiting students, scheduling practices and making sure students attend them, handling logistics and travel arrangements, collecting permission slips, and completing the paperwork required for the trip to nationals. The mentors fill in the rest, working with students weekly, and then more often as the competition date draws near. Some have donated more than 150 hours district-wide.

"Spokane's local businesses have shown great support of CyberPatriot by allowing their employees to participate as mentors who provide training for their area of expertise," Patton explained. "We have a perfect blend of mentors, including former CyberPatriot competitors and experts in software, operating systems, hardware, and security. They all freely lend their expertise to all the teams."

In addition, support from Spokane Public Schools' Career and Technical Education department has provided opportunities for students to compete and learn skills that are on the cutting edge of technology.

Mentors include Dan Wordell, Roger Carbajal and Brandon Thompson of the SPS Instructional Technology Support Center, Kurt Strauss of Microsoft Corp., Don Edwards of Epicor, Glen Bell of Purcell Systems, Eric Turner from Northwest Registered Agents LLC, and college students and former CyberPatriot competitors Alex Daranutsa, Tu Trong and Jacob Thompson.

John R. Rogers High School's open division teams are ready for CyberPatriot V. The school's AFJROTC team was named AFJROTC service champion, and also took second place in Computer Defense in CyberPatriot IV. Also from Spokane Public Schools, Lewis and Clark High School took first place in Forensics, and second place in Computer Defense in the open division.

"There is very little we do these days that is not in some way affected or controlled by computers. Security of these systems and networks is critical," said Patton. "CyberPatriot gives our students skills that are needed in today's world and can turn into well paying jobs."

For many Spokane CyberPatriots, that's happening sooner, rather than later. Over the past few years, many students have been hired as interns at the district's Instructional Technology Support Center (ITSC) and one is currently seeking a career there.

"They make good hires due to their passion, commitment and leadership training," said Terry Yeigh, Computer Science instructor and CyberPatriot coach at Rogers High School. "Students have had the opportunity to learn the necessary skills and have proven that they are willing to learn and study to achieve a higher skill level. Also, ITSC managers have the chance to see how the students react and handle pressure and problem solve."

With continued community support, Spokane's CyberPatriots envision the Lilac City becoming synonymous with cyber security.

"My hope is that Spokane Public Schools becomes the leader in this area," Yeigh said, "and becomes known for its pursuit of being the leader in Information Technology education."

Rogers HS coaches are Tim Young, Terry Yeigh, Chuck Dravland, Debbie Smith, Col. Don Oukrop and MSgt. Loyd Patton. The North Central HS coach is Josh Harrison. The Lewis and Clark HS coach is Mark Rhoades. The Ferris HS coach is Skip Carter. The Shadle Park HS coach is Steven Roffler.

Seven teams of the 24 finalists competing in Washington, D.C., last year were from four high schools in Spokane Public Schools.

Answer to Monthly Question

The answer is: **Secure Shell** (**SSH**), sometimes known as Secure Socket Shell, is a UNIX-based command interface and protocol for securely getting access to a remote computer. It is widely used by network administrators to control Web and other kinds of servers remotely. Source: *SearchSecurity*

This Month in Cyber History

The first ARPANET message was sent at 10:30 p.m. on Oct. 29, 1969. The ARPANET was the predecessor to the Internet.

Source: *The Washington Post*

Northrop Grumman Foundation Continues Strong Support for CyberPatriot Program (Cont'd)

(Continued from Page 1) The CyberPatriot competition is a wonderful program through which we can reach out into schools across the country, and around the world, to teach and inspire young adults to explore the exciting world of cybersecurity."

The Northrop Grumman Foundation's support to CyberPatriot has enabled significant growth in the program. In 2012, more than 1,000 teams – a 53 percent increase over 2011 – participated in the competition from all 50 states, and U.S. Department of Defense dependent schools in Europe and the Pacific, as well as teams from Canada. Northrop Grumman Corporation also contributes employee volunteers, expertise and resources, as well as scholarship funds for the winning teams. The company also provides internships to a number of CyberPatriot competitors, as do other industry and government organizations. These internship opportunities serve both CyberPatriot participants and cybersecurity employers as the nation strives to fill the critical need for cyber professionals.

"Since Northrop Grumman began sponsoring CyberPatriot, the program has reached more than 12,000 students worldwide sparking excitement among today's youth to help fill the critical gap in our nation's cyber workforce," said Diane Miller, Northrop Grumman program director, CyberPatriot. "We are so proud of these students, who have exhibited incredible teamwork and leadership skills, as well as strong technical and network defense skills. CyberPatriot is helping these students navigate the burgeoning cybersecurity career field while emphasizing life skills that are fundamental to future success."

Northrop Grumman is committed to supporting cybersecurity education, training and technology. At the collegiate level, Northrop Grumman is launching a unique honors program with the University of Maryland called the Advanced Cybersecurity Experience for Students. This program will immerse undergraduate students in all aspects of the field to help meet growing national cybersecurity workforce needs.
The company also supports the Mid-Atlantic Regional and the National Collegiate Cyber Defense Competition. Northrop Grumman also leads a Cybersecurity Research Consortium, an industry/academia partnership addressing the cybersecurity challenges of the future, and is partnered with the University of Maryland Baltimore County Research Park Corporation to create a pipeline for new cybersecurity technologies called the Cync Program.

Northrop Grumman also operates its own Cyber Academy to promote professional training and development and attract top-level talent. For more information on Northrop Grumman's work in cybersecurity, go to www.northropgrumman.com/cybersecurity.

The Northrop Grumman Foundation supports diverse and sustainable programs for students and teachers. These programs create innovative education experiences in science, technology, engineering and mathematics. For more information please visit www.northropgrumman.com/foundation.

Coaches' Corner

- **CyberPatriot V Competitor Registration**. CyberPatriot V Competitor Registration is open at: www.uscyberpatriot.org.

- **Coaches' Online Meetings** will be held in three 45-minute repeat sessions on November 13 and 14 at different times to accommodate the different time zones and work schedules. Check your e-mail in for details. To access the Coaches' meeting slides click here or go to http://www.uscyberpatriot.org/CP5/CP%_20V%20Documents/Forms/AllItems.aspx

Competition Checklist

Before the start of the Round
- **Arrange Internet Back-up Plan**
- **Install WinMD5.**
- **Install VMware Player 5.0.**
- **Install 7-Zip or WinZip.**
- **Download the image.**
- **Verify the checksum of the image.**

During the Round
- **READ THE INSTRUCTIONS**. (Most trouble calls are caused by competitors not reading instructions.)
- **Decompress the image.**
- **Read the README.txt file.**
- **Open the image** with VMWare Player. Time starts when OS background appears.
- **Work on the image**.
- **Close the image** and secure it. Time stops.

Post Competition
- **Do not open Image,** unless requested by the CyberPatriot Program Office. Images opened or modified after the competition period will be considered tampered images.
- **Delete image** per instructions in the competition e-mails. Teams pending appeals or inquiries shall not delete the images until requested by the CyberPatriot Program Office.