COMMISSIONER'S CACHE

You will read in these pages this month the big announcement of CyberPatriot National Coach of the Year Mandy Galante and CyberPatriot National Mentor of the Year Rob Karas. These OUTSTANDING people were selected from a field of worthy candidates who are all in their own right deserving. But through a lengthy and careful process we are proud to recognize Ms. Galante and Mr. Karas as truly the best of the best who deserve admiration and congratulations from all of us.

We all know that CyberPatriot is fueled by the great support of our sponsors, led by Northrop Grumman Foundation. And we know that every week willing AFA volunteers work to promote and support CyberPatriot nationwide and beyond. But without brave individuals like our coaches and mentors the program simply could not exist.

They are the hard working people who recruit, work with, and genuinely teach and lead the students for whom CyberPatriot was created and operates. It is this group of people who make it all work. And knowing the two individuals we are honoring this year, I am sure they would tell you the honor they are being given should be shared by the thousands of other coaches and mentors who work so hard every season to make CyberPatriot the national success it has become.

We look forward to honoring Ms. Galante and Mr. Karas at the Air Force Association's Convention in September. But on their behalf, thanks to ALL of you.

Bernard K. Skoch | National Commissioner

DATES TO KNOW

AUG. 7	End of Exhibition Round 2
SEPT. ?	Sneak Preview (Date TBD)
SEPT. 15	Start of Training Round
OCT. 4	CP-X Team Registration Deadline
OCT. 10	End of Training Round

THANK YOU TO ALL OUR HOST ORGANIZATIONS FOR A FANTASTIC SUMMER OF CYBERCAMPS!

Have CyberPatriot-related news you want to share? Don't be shy! Tell us about it and you just might see it in the next newsletter!

info@uscyberpatriot.org

COMPETITION SEASON PREP BEGINS — 64-BIT SYSTEMS REQUIRED

September is almost here and so is the beginning of the competition season. Exhibition Round 2 finishes on Aug. 7, ending the CyberPatriot summer activities. Teams that have not participated in the round are encouraged to try it. Only Coaches need to be registered. The round will not be extended.

Teams should prepare their competition systems as soon as possible. The Sneak Preview is a good time for teams to test their systems.

64-Bit Systems Required
Teams are required to use 64-bit host computer systems in the CyberPatriot X. Use of 32-bit systems will cause compatibility issues in the competition and will not be grounds for ap-

peal. The image player will be the 64-bit VMware Workstation Player 12.5.7 or higher. The version fixed compatibility issues with Windows 10 hosts. Technical specifications for CyberPatriot X are located at http://uscyberpatriot.org/competition/Competition-Overview/technical-specifications.

Macs and Non-Windows Operating Systems
Teams using Macs and other non-Windows operating systems should have at least one computer with a 64-bit Windows operating system that meets the specifications posted at the link above. Issues stemming from the use of Macs and Linux computers are not grounds for special consideration.

Sneak Preview
All teams wanting to test drive the CyberPatriot X competition system may participate in the Sneak Preview on a Saturday in September. The event will last four hours and include two images. The Sneak Preview date will be announced at the end of August. The preview is not a competition round and will not be extended for teams unable to participate.

Training Round
The CyberPatriot X Training Round is scheduled for Sept. 15—Oct. 10. It will offer entry-level images with answer keys for training all teams. The round may feature images not included in the Microsoft Imagine offering.

WHERE ARE THEY NOW? — MATTHEW SPRENGEL, TROY HIGH SCHOOL

Matthew Sprengel graduated in June, 2017 as the valedictorian and Julian A. McPhee Scholar for of the College of Business at California Polytechnic University at Pomona. He finished with a 3.99 GPA as a Computer Information Systems major in just three years. He was awarded the Scholarship For Service as a college freshman and has been offered a position with the Department of Homeland Security in Cybersecurity.

Matthew was one of five Navy JROTC cadets on Troy's very first CyberPatriot team as a 9th grader at Troy High School (Fullerton, CA). Like many high school freshmen, Matthew joined just about everything that Troy Navy JROTC had, which was a lot. He competed nationally while at Troy HS in CyberPatriot, orienteering, and academics, and holds the school record for most miles traveled (27,000) and states visited (10) by a student while representing the school.

Matthew graduated in 2014 as the Navy JROTC commanding officer of 400 cadets and the co-captain of our Cyber Warriors team. Troy finished 4th overall and 1st in the digital crime scene event. During Troy's very first CyberPatriot Nationals competition, Matthew learned CISCO during the competition with the help of a CISCO mentor, and the team finished 2nd in that event for the All Service Division. Matthew told his coach, Allen Stubblefield, that he chose to pursue a degree in cybersecurity instead of mechanical engineering because of his experience at the CyberPatriot VII nationals.

Matthew followed his passion while refining his cybersecurity talents by competing on the Cal Poly Pomona Collegiate Cyber Defense Competition team for two years. Matthew and fellow Troy HS graduate Benjamin Dillon also teamed up to create the Facebook Challenge, a CyberPatriot Nationals event for the past two years.

Have a success story to share? Contact the CyberPatriot Program Office today!

Linux is user friendly...
It's just highly selective about who it is friends with!

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 next 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
  *Teams created before July receive 20% discount.

- **Recruitment Material Available.** Request handouts free of charge! Click here for more information.

HOSPITALS A TARGET FOR CYBER ATTACKS

As we hear more and more about cybersecurity concerns in major industries such as the federal government and financial services, one industry getting overlooked is the healthcare industry. Only a decade ago the large majority of health records were on paper, but over the course of the past few years everything has gone digital. With this sudden transition, the security and confidentiality of theses health documents has been at risk.

The issues arise from a lack of funding in information technology within the healthcare industry, as well as a higher financial pay out for medical records on the black market, according to a 2014 FBI alert. While most industries invest more than 12 percent of their IT budgets to cybersecurity, the healthcare industry average is just around half of that. This is leaving the industry incredibly vulnerable to attacks that they are not ready for.

To put it into perspective, the financial consequence of these cybersecurity breaches can be costly, averaging around $355 per stolen record. Estimates from a 2015 study by IBM showed that over 100 million healthcare records were compromised that year. These attacks happened from more than 8,000 devices from countries all over the world.

While people are becoming more aware of the work to be done within the industry and improvements being made, there is still much work to be done. Healthcare has become a prime target of cyber attacks and with this increase threat to our health care's cybersecurity there is a higher demand for talent in this field to help put a stop to the breaches.

SPOTLIGHT: CYBERPATRIOT IX COACH AND MENTOR OF THE YEAR

Mandy Galante
Coach of the Year
Red Bank Regional HS
Little Silver, NJ

As a CyberPatriot Coach and teacher, Mandy Galante is doing something right.

She has been lead teacher of the Red Bank Regional Academy of Information Technology for many years, after building the curriculum from the ground up. She trained the CyberPatriot III National Champions in the Open Division and has since then brought teams to the CyberPatriot VII, VIII, and IX National Finals, a feat not possible without her openness to help her students improve, and her own personal drive to return to the stage.

So what exactly makes her and her teams so successful?

Ask team member Kyle Neary and he'll tell you " Never in my life have I had a teacher as effective at her job as she is. Every day I can't wait to be in her class. Even the more boring topics she is able to make fun, interactive, and interesting. I've never met a kid who didn't enjoy her class."

Though she teaches only part-time, she's always around. Whether she is helping students prepare for exams, or even spending long hours preparing for CyberPatriot practices, her door is always open. She stays in contact with many well-respected members of the local and national IT community, and often brings in speakers, including FBI investigators and professional penetration testers, to reinforce recent topics.

She is serious about holding her competitors to high standards, requiring everyone to sign an ethics agreement at the beginning of the season, ensuring they use their cybersecurity knowledge responsibly. But more than that, she wants the best for her students.

Even after earning the title of National Runner-Up in CP-IX (2017), Mrs. Galante's work as a coach wasn't over. She spent the bus ride home from Baltimore making calls to surprise her team with a hero's welcome from the local police and fire departments. She also had the entire student body lining the halls to congratulate her team members on their achievements.

Mrs. Galante is well-deserving of the title of CyberPatriot IX Coach of the Year!

Rob Karas
Mentor of the Year
Battlefield High School
Haymarket, VA

Rob Karas is a model mentor for CyberPatriot.

As the director of Cybersecurity Assessments and Technical Services (NCATS) for the Department of Homeland Security, Mr. Karas has a history of shaping and promoting the adoption of cybersecurity industry-leading practices.

From a technical standpoint, Mr. Karas has a plethora of knowledge and skills. Using website demonstrations, one-on-one teaching, concepts of the day, and stories from personal and professional experience, Mr. Karas has been able to provide students with an avenue to success in the CyberPatriot competitions. His technical proficiency has even led to him being considered the "cyber man" in his community. And he has the record to back the title… Fours years of mentoring ILITE Cyber at Battlefield High School has led to a remarkable numerous first place finishes in the state and regional rounds across all levels of the competition (division, skill tier, etc.).

But Mr. Karas doesn't limit his mentorship to computer skills. He also instills good character in his students, placing emphasis on their grit and integrity. With strong family, religious, and societal values, Mr. Karas sacrifices personal time to ensure he can give to his community. In fact, he's been known to arrange his work schedule, often starting his day at 4am, so that he has time to complete his work, and then attend to working with the ILITE Cyber students, with enough time left to spend with his family at the end of the day. Mr. Karas' dedication never stops.

Beyond the classroom, Mr. Karas has done great work hiring cyber interns and professionals. He has stood as a reference for his students in their internship and career selection process and is the first to write a recommendation for any of his students entering the workforce. He even keeps his boss at DHS up-to-date on what is going on with the program.

Simply put by team coach, Gail Drake, "[Rob] represents the definition of a 'GOOD MAN and he is a huge fan of CyberPatriot!"

"NEW COLLAR" JOBS IN CYBERSECURITY Written by John Slife, CyberPatriot Intern

The cybersecurity job market is expected to have 1.5 million shortages by 2020. Without the necessary manpower, companies will fail to bolster their digital immune systems, leav-

ing themselves vulnerable to cyberattacks. To meet this challenge, companies like IBM are changing how they hire workers, adopting a "new collar" cybersecurity workforce strategy.

Critical to this strategy are new hiring tactics in cybersecurity. Companies are finding it increasingly important to bring more people with a broader set of talents to the cybersecurity workforce. Given that many of the skills and attributes necessary to succeed in cybersecurity jobs don't need traditional four year university degrees, companies creating these new collar jobs focus on different criteria.

New collar jobs don't place as much emphasis

on education or experience, focusing instead on the ability to do the job. This allows for more avenues from which companies will hire. Workers can come from P-TECH schools, community colleges, cyber camps, or can even be self-taught.

With this new focus, enterprises can increase the number of potential candidates who can quickly get to work and boost their workplace diversity. While organizations ignoring these hiring tactics struggle to fill the skills gap, these companies will prosper.

DECRYPT.EXE

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Answer:
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THIS MONTH IN CYBER HISTORY

Aug. 9, 1927 — In August of 1927, computer pioneer Marvin Minsky was born. Minsky made many major contributions to computer science in the areas of Artificial Intelligence (AI), cognitive psychology, mathematics, computational linguistics, robotics, and optics.

In 1987, Minsky wrote the landmark book The Society of Mind, which proposed that human consciousness and thought processes were decomposable into a series of mini-minds or agents, each of which performed specific functions.

Minsky received a BA and PhD in mathematics at Harvard and Princeton. There he envisioned a "rat-in-a-maze" neural network simulator, which became the Stochastic Neural Analog Reinforcement Calculator (SNARC) built with assistance from Dean Edmonds. His other inventions include mechanical hands and other robotic devices, the confocal scanning microscope, the Muse synthesizer for musical variations (with Ed Fredkin), and the first LOGO turtle (with Seymour Papert). His later work focused on understanding the connections between computers and commonsense reasoning.

He served on the MIT faculty from 1958 to his death in January of 2016. In 1959 he and John McCarthy initiated what is known now as the MIT Computer Science and Artificial Intelligence Laboratory. He was the Toshiba Professor of Media Arts and Sciences, and professor of electrical engineering and computer science.

For more information, visit:
http://www.computerhistory.org/tdih/August/9/