



The CyberSentinel

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Commissioner's Cache



CyberPatriot is getting even better! Based on your input, CP-VII teams in the high school Divisions will compete in performance-based tiers after Round 2. This is a huge evolution! Similar performing teams will be competing for recognition in tiers reflecting their level of performance. But we need your help, so please see the article on the new competition design in this issue to learn more about the brackets and the naming contest. Also, our Elementary School Cyber Education Initiative has passed its first development milestone, and by the end of CyberPatriot VII, CyberPatriot will span cyber education from elementary school all the way to high school. Oh! This is a last-minute reminder that it's time again for our Coach and Mentor of the Year nominations, due June 15, 2014. The Air Force Association will again recognize one Coach and one Mentor from ALL of our CP-VI Coaches and Mentors (to include those from middle school teams). Please see the CyberPatriot website for details. Note also that our Exhibition Rounds will continue to be held once a month during the summer. All a team needs to compete is a registered Coach! I hope you have a great vacation. CyberPatriot VII is shaping up to be the best season yet!

Bernie Skoch
National Commissioner
CyberPatriot Program
Air Force Association



Program Office Bits

CyberPatriot VII registration is open!
Register today at www.uscyberpatriot.org

Coach & Mentor of the Year nominations
deadline: June 15, 2014

Exhibition Round #3: June 16-25

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Debuting the CP-VII Brackets and Dates!

Following the CyberPatriot VI season, we sent out a survey to all Coaches and Mentors for input on how to improve our competition for the upcoming season. Some of these questions dealt with the overall design of the competition, including image difficulty, advancement, and awards. Some of the main concerns in this area were the following:

- The competition became too difficult too quickly for new and inexperienced teams.
- A national award track distinct from the state and regional awards is not intuitive.
- The awards were unclear about which teams performed best in some states.

We have heard these concerns and are prepared to mitigate them by debuting a new design for the CP-VII competition. It was created to specifically address deficiencies in the old bracket and make the competition more fun and exciting for all of our teams.

The high school competition brackets are more expansive than last season due to the inclusion of competition tiers following Round 2, where teams will be placed in an Advanced, Intermediate, or Basic tier based on their skill level. Each tier has a different degree of difficulty aimed at challenging teams with different levels of experience. The Middle School Division has a separate bracket that does not have tiers.

This new structure has three benefits. First, it allows both the most experienced and the newest CyberPatriot teams a chance to learn and grow throughout the season. Second, it clarifies the awards structure, as teams will have a better idea of how the stack up in their state, region, and country. Finally, geography now plays a larger role in advancement.

Please see the description of each Division's bracket starting on Page 3 and the competition

dates shown below.

CP-VII Competition Dates

Oct. 8-22, 2014

- Practice Round (All Divisions)

Oct. 24-26, 2014

- Round 1 (Open and All Service)
- Practice Round 2 (Middle School)

Nov. 14-16, 2014

- Round 2 (Open and All Service)
- Round 1 (Middle School)

Dec. 5-7, 2014

- State Rounds (Open and All Service)
- Round 2 (Middle School)

Jan. 16-18, 2015

- Regional Rounds (Open)
- Category Rounds (All Service)
- Semifinals (Middle School)

Mar. 11-15, 2015

- National Finals Competition (All Divisions)



It's Not Too Late! Apply for an Internship with Northrop Grumman

It's not too late to apply!

Summer is right around the corner, but there is still time to start thinking about putting your skills into action. An internship at Northrop Grumman Corp. is unique. You'll work side by side with our technical experts to learn more about the career field and how important this specialty is to national security. You will learn new skills, explore our enterprise, network with experts, connect with thought leaders, and finish with a résumé that opens doors.

Here's what you need to know to apply: High school-level internships require students to be at least 16 years of age, enrolled in high school, and studying areas of science, technology, engineering, and mathematics. CyberPatriot-specific internship opportunities require at least one year of participation in the CyberPatriot program and enrollment in technical high school electives within the areas of STEM.

For college-level internships we typically look for rising sophomores, juniors, seniors, and graduate students at accredited colleges and universities. We look for high potential students of all grade levels and have internship opportunities for high school students.

Work assignments typically begin in May/June and end in August/September. There are some opportunities for interns to stay on in a part-time internship capacity year round. Included in many of our intern programs are orientation and kickoff events, networking opportunities with leadership and other interns, social activities, learning sessions, and professional development opportunities.

Current openings include positions in Annapolis Junction, Md., and Fairfax, Va.

For more information visits: <http://www.northropgrumman.com/Careers/StudentsAndNewGrads/Pages/Cyberpatriot.aspx>.

Questions? Contact CyberPatriot@ngc.com

Coaches' Corner

- **CyberPatriot VII Registration.** CyberPatriot VII Coach Registration is now open. Coaches must be registered and cleared before their competitors may register. Go to: www.uscyberpatriot.org to register.
- **Coach and Mentor of Year.** Applications are due by 5:00PM EST on June 15, 2014. Forms can be found on www.uscyberpatriot.org.
- **Air Cards.** Coaches with air cards from the CP-VI season should return them immediately. Return shipping labels can be requested from the CyberPatriot Program Office.
- **Coaches' Meeting.** The June Coaches' Meetings will be held on the following dates:
 - *Monday, June 16 @ 4:00 PM EST
 - Wednesday, June 18 @ 9:00 PM EST

*The Monday session will be recorded and posted to the Cyberpatriot website

390

The number of teams registered for CP-VII
(as of June 9, 2014)

Former CyberPatriot Competitor Invited to 2014 White House Science Fair



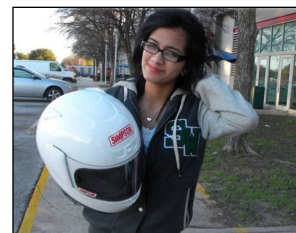
Photo courtesy of @whitehouseosp

While most students spend this time of year gearing up for finals and the last few weeks of high school, Deidre Carrillo was gearing up for something else — a one-on-one demonstration of her electric race car with President Obama.

Carrillo, a senior at Southwest High School in San Antonio, Texas, and former CyberPatriot Competitor, earned a trip to Washington, D.C., for the 2014 White House Science Fair, after she and the members of her school's engineers team, placed first in Florida's Emerald Coast Electrathon — a national competition for student-built electric cars. As driver of the team's Dragon 1 vehicle, she helped lead her team to second place finishes in the Electrathon for two years in a row before finally clinching a blue ribbon this year.

Carrillo knows what it's like to sit behind the wheel of an innovative electric vehicle she helped design and build, and to feel the adrenaline rush of racing it over a finish line. And on May 27, she also felt the adrenaline rush of presenting her project to President Obama.

After graduation, Deidre plans to study public relations at Texas A&M University.



The CyberSentinel

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CP-VII Brackets: Open Division

Qualification Rounds

CP-VII Rounds 1 and 2 are the same as CP-VI. All Open Division teams can participate in these rounds. A team's performance in Round 1 does not affect its ability to compete in Round 2. Teams missing Round 1 can participate in Round 2.

Advancement to the State Rounds

Team scores from Rounds 1 and 2 are added together to determine placement in one of the three tiers. Each of these tiers (Advanced, Intermediate, and Basic*) has a State and Regional Round. The Advanced Tier leads to the National Finals Competition.

(*Tier names subject to change. See Page 5.)

Teams in the top 30 percent of combined Round 1 and Round 2 scores are placed in the Advanced Tier. Teams in the middle 40 percent of combined scores are placed in the Intermediate Tier, and the remaining 30 percent are placed in the Basic Tier.

Tier placement is permanent. Teams may not be promoted/demoted and may not self-select tiers. For awards purposes, Advanced teams are always higher than Intermediate teams, which are always higher than Basic teams.

State Rounds

All teams may participate in a State Round corresponding to their tier placement. The State Rounds will have different difficulty levels at each tier. Teams that missed Rounds 1 and 2 may participate in the Basic Tier State

Round. The top 3 teams overall in each state, regardless of their tier, will be given AFA State Awards following the rounds.

Advancement to the Regional Rounds

Advancement occurs in two stages. First, the top 3 teams in each state at each tier level are advanced. Second, the teams with the top 12 highest scores in the State Rounds that are not within the top 3 for their state advance as Wild Cards. All teams advancing to Regional Rounds receive Tier Certificates for their achievement.

State Awards and Advancement Example

To illustrate the State Awards and Advancement process, see the box to the right. In this example, Minnesota has seven Open Division teams. They are listed in terms of their score following the State Rounds.

- **Maple Grove, Andover, and Blaine** win AFA State Awards for being in the top 3 in Minnesota overall.
- **Maple Grove** advances to the Advanced Regional Round, as it is in the top 3 for Minnesota in that tier and receives a certificate.
- **Andover, Blaine, and Anoka** advance to the Intermediate Regional Round for being in the top 3 for Minnesota in that tier and receive certificates.
- **Park Center** may advance to the Intermediate Regional Round as a Wild Card if it is in the top 12 nationally among teams that are not in the top 3 for their state.
- **Champlain and Osseo** advance to the Basic

Minnesota Example

Advanced Tier

1. Maple Grove Senior High
2. -
3. -

Intermediate Tier

1. Andover High School
2. Blaine High School
3. Anoka High School
4. Park Center Senior High

Basic Tier

1. Champlain High School
2. Osseo Senior High
3. -

Regional Round because they are in the top 3 for Minnesota in that tier and receive certificates.

Regional Rounds

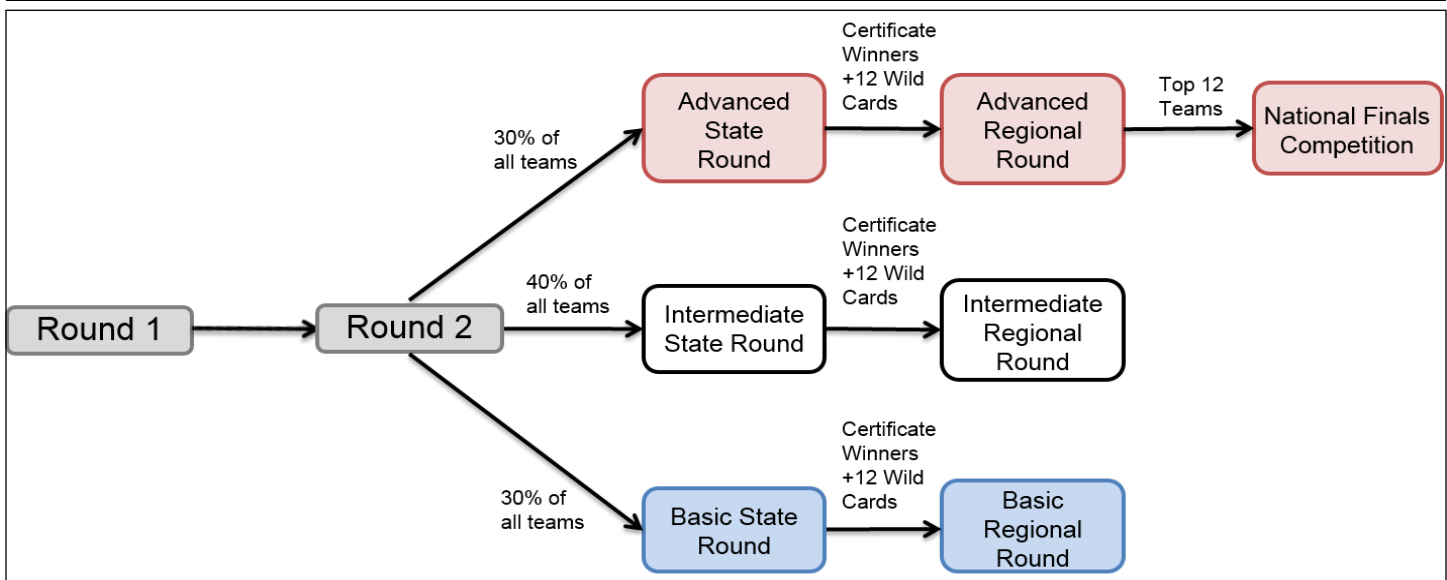
Like State Rounds, Regional Rounds have different difficulty levels at each tier. The top 3 within each Region overall, regardless of tier level, win an AFA Regional Award. Regional Awards are based solely on teams' performances in the Regional Round. State Round performance and awards are not factors.

The top 3 teams in each region within each tier will receive Tier Certificates.

Advancement to the National Finals

Teams with the top 12 scores in the Advanced Regional Round will advance to the National Finals competition. Geography is not a factor in National Finals advancement.

CP-VII Open Division Bracket



CP-VII Brackets: All Service Division

Qualification Rounds

Rounds 1 and 2 are the same as previous seasons. Every All Service Division team can participate in these rounds. A team's performance in Round 1 does not affect its ability to compete in Round 2. Teams missing Round 1 can participate in Round 2.

Advancement to the State Rounds

Team scores from Rounds 1 and 2 are added together to determine placement in one of the three tiers. Each of these tiers (Advanced, Intermediate, and Basic*) has a State and Category Round. The Advanced Tier leads to the National Finals Competition.

(*Tier names subject to change. See Page 5.)

Teams in the top 30 percent of combined Round 1 and Round 2 scores for their category are placed in the Advanced Tier. Teams in the middle 40 percent of combined scores in each category are placed in the Intermediate Tier, and the bottom 30 percent in each category are placed in the Basic Tier.

Tier placement is permanent. Teams may not be promoted or demoted to different tiers and may not self-select their tier. For awards purposes, Advanced teams are always higher than Intermediate teams, which are always higher than Basic teams.

State Rounds

All teams may participate in a State Round corresponding to their tier placement. The State Rounds will have different difficulty lev-

els at each tier. Teams that missed Rounds 1 and 2 may participate in the Basic Tier State Round. The top 3 teams overall in each state, regardless of their tier or category, will be given AFA State Awards following the rounds.

Advancement to the Category Rounds

Advancement occurs in two stages. First, the top 6 teams in each category in each tier advance to the Category Round. Second, the teams with the top 6 highest scores in the State Rounds, regardless of category, among the remaining teams advance as Wild Cards. All teams advancing to Category Rounds receive Tier Certificates for their achievement.

State Awards and Advancement Example

To illustrate the State Awards and Advancement process, see the box to the right. In this example, Minnesota has seven All Service Division teams. They are listed in terms of their score following the State Rounds.

- **Maple Grove, Andover, and Blaine** win AFA State Awards for being in the top 3 in Minnesota overall.
- **All teams** may advance to the Category Rounds because advancement is not based on their within-state rankings. If any of the teams are within the top 6 in their service in their tier, they may advance. Alternatively, they may advance as a Wild Card.

Category Rounds

Like State Rounds, Category Rounds have different difficulty levels at each tier. The top 3

Minnesota Example

Advanced Tier

1. Maple Grove CAP Squadron
2. -
3. -

Intermediate Tier

1. Andover USNSCC Division
2. Blaine USMC JROTC
3. Anoka Navy JROTC
4. Park Center AFJROTC

Basic Tier

1. Champlain AFJROTC
2. Osseo CAP Squadron
3. -

within each category overall, regardless of tier level, win an AFA Category Award. Category Awards are based solely on teams' performances in the Category Round. State Round performance and awards are not factors.

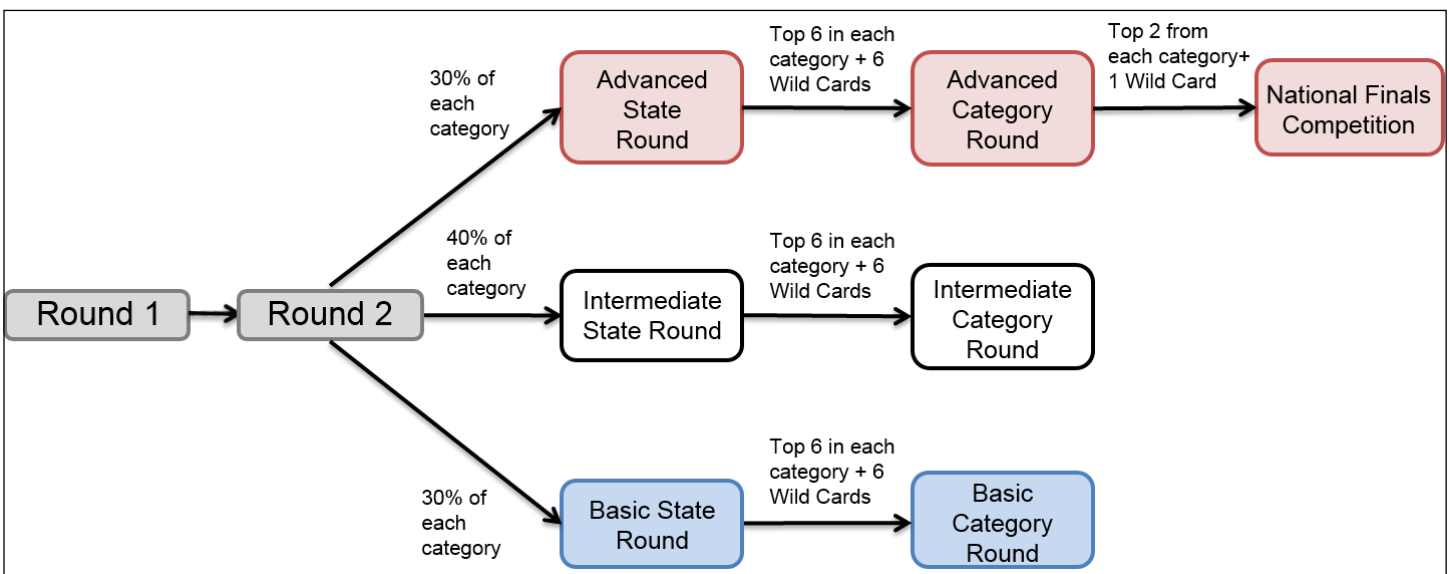
The top 3 teams in each category within each tier will receive Tier Certificates. There are no Regions in the All Service Division.

Advancement to the National Finals

The top 2 teams from each category and 1 Wild Card in the Advanced Category Round will advance to the National Finals competition.



CP-VII All Service Division Bracket



CP-VII Brackets: Middle School Division

Practice Round 2

Because CyberPatriot VII is the first season for the wide release of the Middle School Division, middle school teams will get an extra practice round to familiarize themselves with the competition and gain cybersecurity training before the scored rounds of competition begin.

Qualification Rounds

All Middle School Division teams can participate in these rounds. A team's performance in Round 1 does not affect its ability to compete in Round 2. Teams missing Round 1 can

participate in Round 2.

Advancement to the Semifinals

Team scores from Rounds 1 and 2 are added together to determine placement in the Semifinals. Teams in the top 50 percent of combined Round 1 and Round 2 scores are placed in the Semifinals.

Semifinals and State Awards

The 3 teams in each state with the highest Semifinals score will receive AFA State Awards. If a state has fewer than three teams partici-

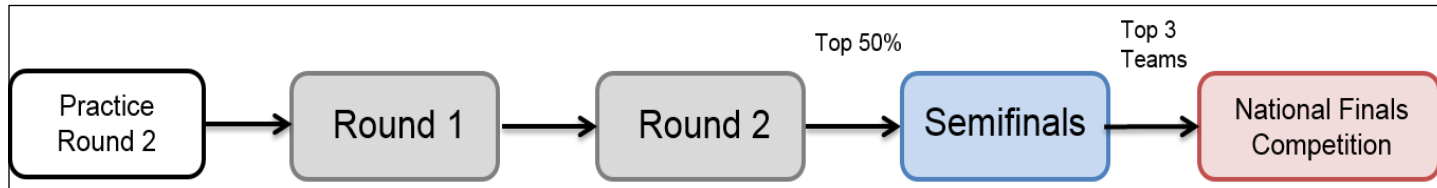
pating in the Semifinals, any missing spots will be filled by non-Semifinalist teams with the highest Round 2 scores.

There are no Regions in the Middle School Division.

Advancement to the National Finals

The 3 teams with the highest scores in the Semifinals will advance to the National Finals Competition.

CP-VII Middle School Division Bracket



Tier Name Contest

As you can see, the design of the CyberPatriot VII competition is much more detailed than in previous seasons due in large part to the inclusion of tiers of difficulty for the later rounds of competition.

In the current design, these three tiers are called Advanced, Intermediate, and Basic. While these names clearly distinguish the tiers from each other, they are frankly too boring. With your help, we can make these tiers a little more fun, exciting, and prestigious going forward. To do that we're having a contest. Here are the rules:

- 1) Any registered Coach, Competitor, Mentor, or Team Mentor for CP-VI or CP-VII may submit an idea for tier names.
- 2) An individual may not have more than one submission.
- 3) All submissions should be sent to info@uscyberpatriot.org. Emails should have the subject "Tier Name Contest" and include your name. Tiers should be listed with the highest on top (i.e. the Advanced Tier in the current setup) and the lowest on bottom.
- 4) The deadline for submissions is July 1. The winning submission will be announced in next month's issue of *The CyberSentinel*. The winner will also receive an iPod Shuffle.

Tier name submissions should:

- Be appropriate (No vulgarity, mention of offensive activity, etc.)
- Show a clear hierarchy between the tiers
- Be easily understood by a wide audience
- (Optional) Relate to cybersecurity or STEM as a whole

Be creative with your suggestions! You have an opportunity to make your mark on the CyberPatriot VII competition before it even starts, so get those submissions in by July 1!



Los Angeles Mayor Eric Garcetti met with Team Azure of North Hollywood High School to congratulate them on being the CP-VI National Champions.

Did You Know??

Cybercrime is a serious matter, but many tech users are unaware of just how costly cyber crime can be. The FBI's Most Wanted List for cyber criminals currently contains just five individuals, but each is responsible for consumer losses ranging from \$350,000 to \$100 million.



For more cybersecurity facts, visit <http://www.floridatechonline.com/online-degree-resources/interesting-facts-on-cyber-security/>



CyberPatriot Word Search



ALGORITHM
COACH
CYBERCAMPS
EXHIBITION
GRUMMAN

INTERNSHIPS
MENTOR
MODULES
NORTHROP
ONLINE

PRACTICE
RECRUITING
REGISTRATION
ROUND
SEVEN

SUMMER
TRAINING
VACATION

CyberPatriot Competitor Wins NCWIT Aspirations in Computing Award

By Thomas Russell, Falcon High School

Congratulations to Hannah Williams, who recently earned a runner-up Aspirations in Computing Award from the National Center for Women and Information Technology (NCWIT). She was recognized for her computing related achievements during an award ceremony held at University of Colorado, Boulder. As an award recipient, Hannah has increased opportunities for internships, scholarships, research experience, and other educational and employment opportunities.



Hannah was granted an academic achievement award from Falcon High School's IT Academy for her academic achievements in Intro and Advanced Computing, as well as Digital Security. Not only is Hannah a vital part of Falcon's successful all-female CyberPatriot Team, she is also very active in sports, being in the No. 1 singles position in tennis. Hannah has a 3.9 GPA average and is taking several AP courses. In the future, she plans to attend George Mason University, where she hope to study computer science. There is no doubt that her knowledge of information security and the CyberPatriot techniques she learned at Falcon High School will give her a head start.



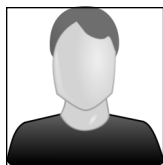
Best of luck, Hannah!

E B N B E U N E S R O N C N X
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T R A I N I N G O N Q U S S R

Coach & Mentor of the Year



With another successful season of CyberPatriot in the books, it is time to recognize the hard-working men and women who made it all possible — the Coaches and Mentors!



If you think your Coach or Mentor is the best of the best, nominate him or her to be recognized! All nominations must be submitted by June 15, 2014.

Winners will be announced on July 31, 2014. More information is available at <http://www.uscyberpatriot.org/Pages/Announcements/Coach%20and%20Mentor%20of%20the%20Year%20nominations.aspx>

This Month in Cyber History

On June 11, 1978, Texas Instruments, Inc., introduced Speak & Spell, a talking learning aid for ages seven and up. Its debut marked the first electronic duplication of the human vocal tract on a single chip of silicon. Speak & Spell utilized linear predictive coding to formulate a mathematical model of the human vocal tract and predict a speech sample based on previous input. It transformed digital information processed through a filter into synthetic speech and could store more than 100 seconds of linguistic sounds.



For more information visit <http://www.computerhistory.org/ttdi/June/11>

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