### **CYBERSECURITY**



#### **OVERVIEW**

Participants complete a Cybersecurity exam covering general cybersecurity vocabulary and knowledge needed to execute tasks commonly performed by all levels of cybersecurity professionals alike. Using digital presentation software such as Powerpoint, Prezi, or Moovly, participants shall prepare a presentation, addressing a specific cybersecurity issue, to a group of hypothetical corporate board members (i.e. judges). Participants must explain the importance of cybersecurity and why it is essential that the organization invest in such measures. The problem statement will be posted on the TSA website under Competition/Themes and Problems. Semifinalists exhibit proficiency by recommending security measures to address various scenarios based on factors such as efficiency, feasibility, and ethical impacts.

#### **ELIGIBILITY**

One (1) individual; two (2) members per chapter may participate.

#### **TIME LIMITS**

#### PRELIMINARY ROUND

Participants have one (1) hour to complete the test.

#### **SEMIFINAL ROUND**

- Digital presentations may be no more than three
   (3) minutes in length.
- 2. Participants have five (5) minutes to present.

#### **LEAP**

A LEAP Response is required for this event and must be submitted at event check-in.

#### **ATTIRE**

TSA competition attire is required.

#### **PROCEDURE**

#### PRE-CONFERENCE

- 1. Participants research the issues surrounding cybersecurity.
- 2. Participants create a digital presentation according to the regulations.

#### PRELIMINARY ROUND

- Participants report for the test at the time and place stated in the conference program and submit a hard copy of the LEAP Response with no cover page.
- 2. Participants take the exam.
- 3. A list of twelve (12) semifinalists (in random order) will be posted.

#### SEMIFINAL ROUND

- Semifinalists will report at the time and location stated in the conference program to schedule the on-site challenge.
- At least ten minutes prior to the scheduled time, semifinalists report to the event area with the required presentation hardware for the on-site challenge.
- 3. Participants have ten (10) minutes (see Time Limits) to present their solution to the corporate board members (i.e. judges).
- 4. The LEAP Response will be judged for semifinalists.
- 5. Ten (10) finalists will be announced during the conference awards ceremony.

#### **REGULATIONS AND REQUIREMENTS**

#### PRELIMINARY ROUND

- A. Participants take a multiple choice test to evaluate their knowledge of basic cybersecurity fundamentals.
- B. Tests may be administered online or via a scan-type answer sheet.



- C. Depending on the format of the exam, which will be posted on the Competition Updates page three (3) months prior to the conference, participants shall be prepared to bring:
  - 1. Two (2) sharpened No.2 pencils
  - 2. One (1) laptop
  - 3. Extra charged laptop battery
- D. Should the test be administered online, participants will be required to use their own laptops to take the timed exam. Participants will not:
  - be required to download software on-site.
  - have access to electrical power/outlets during the event.
- E. Participants will:
  - be given one (1) hour to complete the sixty (60)-question exam with one (1) minute to read and answer each question.
  - not be allowed to use additional resources when taking the exam.
- F. Participants do not have access to the Internet during the event and may need to supply their own Internet depending upon the format of the exam.
- G. Refer to the Competition Updates page (3) months prior the conference regarding logistics pertaining to the exam.

#### SEMIFINAL ROUND

- A. Semifinalists report at the time and location stated in the conference program to schedule the on-site challenge.
- B. Semifinalists report to the event area at the designated time and place.
- C. Participants enter this event with the following scenario in mind:
  - You are an employee at a large firm that is in need of cybersecurity as a result of a recent event (see Competitions/Themes and Problems on the TSA website). You must convince the corporate board members (i.e. judges) to invest in cybersecurity for the firm.

- D. Participants shall focus on the following in their presentation\*:
  - 1. Identify and explain the security problem.
  - 2. Explain how physical and digital security measures protect electronic information.
  - 3. Use real-world data metrics and situations to support the claim.
  - 4. Explain trade-offs when selecting and implementing cybersecurity recommendations.
- E. Participants may use fictitious company names if needed for both the company in which the participant is "employed," as well as the fictitious company offering cybersecurity services. Real names may not be used.
- F. Participants may use the presentation platform of their choice.
  - Video formats may be used (such as Moovly), however, participants may not pre-record the entire audio presentation. The participant must present key points orally to the corporate board members.
  - Presentations shall not last longer than three (3) minutes. Points will be deducted for presentations exceeding this time limit.
  - Highlight your proposal with creative visual elements (e.g. graphics, photos, titles, transitions) to actively engage the audience. Participants may use images and video clips "labeled for reuse," but must properly cite the source (refer to the General Rules).
- G. No commercial or copyrighted material may be used. If the entry contains images of people, proof of consent must be provided for each person in the presentation unless the image is "labeled for reuse."
  - Minors require parental consent
  - Use the Photo/Film/Video Consent and Release form (see Forms Appendix) for any individuals included in the presentation.
  - Participants must attach the consent forms as the last pages of the digital presentation.



- H. All presentation materials must be saved on the laptop or presentation hardware (e.g. I-Pad).
- I. Internet access will not be provided.
- J. Semifinalists are given three (3) minutes to present, and five (5) minutes to respond to questions.
- K. The LEAP Response:
  - Participants document the leadership skills they
    have developed and demonstrated while working
    on this event, and on a non-competitive event
    leadership experience.
  - 2. Find specific LEAP Response regulations in the LEAP Program section of this guide, and on the TSA website.

#### **RESOURCES:**

- Organizing a Visual Presentation—An overview of the steps involved in organizing a visual presentation: 2012books.lardbucket.org/books/ successful-writing/s18-01-organizing-a-visualpresentati.html
- Designing an Influential Presentation— Overview of how to tailor a presentation to influence an audience: www.presentation-pointers.com/ showarticle/articleid/374
- Moovly—Build animated content using a library of objects: www.moovly.com
- Free Presentation Tools— A roundup of presentation tools that are free (or have a free level): guthriejensen.com/blog/freepresentation-tools
- Making Videos from PowerPoint Presentations— Learn step-by-step how to create an HD YouTube video from a PowerPoint presentation and a companion audio recording: www.youtube.com/ watch?v=aNkfZvjPHFE

#### **EVALUATION**

#### PRELIMINARY ROUND

 The test score is used to determine the twelve (12) semifinalists.

#### SEMIFINAL ROUND

- 1. Semifinalists will be evaluated on their delivery and proposal during the oral presentation.
- 2. The content and quality of their LEAP Response.

Refer to the official rating form for more information.

#### STEM INTEGRATION

Depending upon the subject of the problem, this event may align to one or more STEM areas.

#### CAREERS RELATED TO THIS EVENT

This competition connects to one or more of the careers below:

- · Information support & services
- Network systems
- Programming & software development
- Web & digital communications
- · Technical support specialist
- · Computer software engineer
- · Cybersecurity engineer
- Cryptographer
- Cyber Crime Investigator
- · Cyber defense incident responder
- · Cyber forensics expert
- · Cyber legal advisor
- Cyber operator
- Vulnerability assessor



## **CYBERSECURITY** 2020 & 2021 OFFICIAL RATING FORM MIDDLE SCHOOL

Judges: Using minimal (1-4 points), adequate (5-8 points), or exemplary (9-10 points) performance levels as a guideline in the rating form, record the scores earned for the event criteria in the column spaces to the right. The X1 or X2 notation in the criteria column is a multiplier factor for determining the points earned. (Example: an "adequate" score of 7 for an X1 criterion = 7 points; an "adequate" score of 7 for an X2 criterion = 14 points.) A score of zero (0) is acceptable if the minimal performance for any criterion is not met.

#### Go/No Go Specifications

- Before judging the entry, ensure that the items below are present; indicate presence with a check mark in the box.
- If an item is missing, leave the box next to the item blank and place a check mark in the box labeled ENTRY NOT EVALUATED.
- If a check mark is placed in the ENTRY NOT EVALUATED box, the entry is not to be judged.

П	Lanto	n/nre	sentation	hardware	is	nresent
ш	Lapiu	p/pre	Sentation	Haluwale	13	present

- ☐ Completed LEAP Response is present
- ☐ ENTRY NOT EVALUATED

		points

#### **WRITTEN TEST SUBTOTAL** (50 points)

Rules violations (a deduction of 20% of the total possible points for the above sections) must be initialed by the judge, coordinator, and manager of the event. Record the deduction in the space to the right.

Indicate the rule violated: \_

#### **PRELIMINARY SUBTOTAL** (50 points)

SEMIFINAL ON-SITE PRESENTATION (120 points)				
CDITEDIA	Minimal performance	Adequate performance	Exemplary performance 9-10 points	
CRITERIA	1-4 points	5-8 points		
PRESENTATION (90	points)			
Identification and explanation of issue (X2)	Identification and explanation of the issue is unclear.	Issue is defined and explained appropriately.	A clear and concise definition and explanation of the issue is evident.	
Explanation of Importance (X2)	There is little evidence of research; there is a lack of understanding of the issues cited.	There is some evidence of research; an adequate understanding of the issues is present.	Thorough research is clearly evident with a firm understanding of the issues established.	
Creativity, aesthetics, and artisanship (X1)	The presentation lacks creativity; the work is unorganized and sloppy.	Some visual elements of creativity exist in the work. Presentation is generally organized in its explanation of the issue and the visual elements help to enhance the point.	The presentation exudes creativity; essential design principles and elements are well integrated. Presentation logically communicates an important idea and is engaging.	

Record scores



O points) – continued		
A very brief explanation of the solution is presented; there is a lack of creativity in the solution and the necessity of the solution is not emphasized.	An adequate description of the solution is presented and supported by some amount of research and evidence; the solution is somewhat creative.	The solution is supported by the research gathered and is plausible and creative. The solution is communicated clearly and is appropriate.
The presentation does not detail or enhance the essential components of the participant's problem identification and proposal.	The presentation somewhat enhances the essential components of the participants problem identification and solution.	The presentation greatly details and enhances the essential components of the participant's problem identification and solution.
(30 points)		
Participant is verbose and/or uncertain in his/her presentation; participants' posture, gestures, and lack of eye contact diminish the presentation.	Participant is somewhat well- spoken and clear in his/ presentation; participants' posture, gestures, and eye contact are acceptable in the presentation.	Participant is well-spoken and distinct in its presentation; the participants' posture, gestures, and eye contact result in a polished, natural, and effective presentation.
Participant's appearance is unprofessional, sloppy, and/or inappropriate.	Participant's appearance is adequate and appropriate.	Participant's appearance is clearly exceptional, appropriate, and professional.
Participant appears nervous during the presentation; poor posture, poor eye contact, and lack of confidence are evident; participant reads the presentation from notes.	Participant is generally poised, displays eye contact, and is confident, with little sign of nervousness; participant reads from the presentation or notes for key points, but presents clearly.	Participant "commands" the room, and is exceptionally poised, confident, and positive; participant does not use rely heavily on the presentation or reference materials.
	A very brief explanation of the solution is presented; there is a lack of creativity in the solution and the necessity of the solution is not emphasized.  The presentation does not detail or enhance the essential components of the participant's problem identification and proposal.  (30 points)  Participant is verbose and/or uncertain in his/her presentation; participants' posture, gestures, and lack of eye contact diminish the presentation.  Participant's appearance is unprofessional, sloppy, and/or inappropriate.  Participant appears nervous during the presentation; poor posture, poor eye contact, and lack of confidence are evident; participant reads the	A very brief explanation of the solution is presented; there is a lack of creativity in the solution and the necessity of the solution is not emphasized.  The presentation does not detail or enhance the essential components of the participant's problem identification and proposal.  The presentation and proposal.  The presentation and proposal.  The presentation somewhat enhances the essential components of the participant's problem identification and solution.  (30 points)  Participant is verbose and/or uncertain in his/her presentation; participants' posture, gestures, and lack of eye contact diminish the presentation.  Participant's appearance is unprofessional, sloppy, and/or inappropriate.  Participant appears nervous during the presentation; poor posture, poor eye contact, and lack of confidence are evident; participant reads the presentation from notes.  An adequate description of the solution is presented and supported by some amount of research and evidence; the solution is somewhat evidence; the solution is presented and supported by some amount of research and evidence; the solution is presentation somewhat enhances the essential components of the participants problem identification and solution.  Participant is somewhat well-spoken and clear in his/presentation; posture, gestures, and eye contact are acceptable in the presentation.  Participant's appearance is adequate and appropriate.  Participant appears nervous during the presentation; poor posture, poor eye contact, and lack of confidence are evident; participant reads the presentation or notes for key

TIME DEDUCTIONS	
One (1) point per ten (10)-second interval is deducted for speaking under three (3) minutes or over f when the competitor begins speaking.	ive (5) minutes. Time commences
TOTAL TIME FOR SPEECH	
TIME DEDUCTION	
	TOTAL TIME DEDUCTIONS

PRESENTATION LEVEL SUBTOTAL (120 points)

in the column spaces below

#### **CYBERSECURITY**

SEMIFINAL LEAF	P RESPONSE (17 points)		
RITERIA	Minimal performance	Adequate performance	Exemplary performance
EAP Response 0% of the total vent points)	The individual's efforts are not clearly communicated, lack detail, and are unconvincing; few, if any, attempts are made to identify and incorporate the SLC Practices.	The individual's efforts are adequately communicated, include some detail, are clear, and are generally convincing; identification and incorporation of the SLC Practices are satisfactory.	The individual's efforts are clearly communicated, fully-detailed, and convincing; identification and incorporation of the SLC Practices are excellent.
		SEMIFINAL LEAP R	RESPONSE SUBTOTAL (17 points)
nanager of the eve	eduction of 20% of the total possible pont. Record the deduction in the space to lated:		
		SE	EMIFINAL SUBTOTAL (137 points)
o arrive at the TO	TAL score, add any subtotals and su	ubtract rules violation points, as nece	essary. TOTAL (187 points)
omments:			
	:s to be true and accurate to the best	of my knowledge.	
ertify these resul	ts to be true and accurate to the best	of my knowledge.	
	's to be true and accurate to the best	of my knowledge.	
ertify these resul	ts to be true and accurate to the best	of my knowledge.	
tify these resul <b>GE</b>	ts to be true and accurate to the best		



# CYBERSECURITY EVENT COORDINATOR INSTRUCTIONS

#### **PERSONNEL**

- A. Event coordinator
- B. Judges:
  - 1. Semifinalist Round: Two (2) or more
- C. Assistants for the set-up, monitoring, and clean-up of the on-site activity, two (2) or more

#### **MATERIALS**

- A. Coordinator's packet, containing:
  - Event guidelines, one (1) copy for the coordinator and each judge
  - 2. TSA Event Coordinator Report
  - 3. List of judges/assistants/proctors
  - 4. Results envelope with coordinator forms
- B. Tables and chairs for participants
- C. Tables and chairs for judges
- D. Coordinators are responsible for creating the test to be administered at the national conference; copies will be provided by the national TSA office
- E. Answer sheets (scan-type) and paper (if applicable)
- F. Extra sharpened no.2 pencils (if applicable
- G. Twelve (12) copies of a well-written, technologically appropriate problem that can be objectively measured, one (1) copy per individual
- H. Adequate conditions, tools, materials, monitoring, and testing devices for the problem
- A Projector (if available), and connections for both MAC and PC computers to project the presentation if desired.
- J. Presentation screen or wall to project the presentation (if available)
- K. Stopwatch or clock for the timekeeper

#### **RESPONSIBILITIES**

#### AT THE CONFERENCE

- Attend the mandatory coordinator's meeting at the designated time and location.
- 2. Report to the CRC room and check the contents of the coordinator's packet.
- 3. Review the event guidelines and check to see that enough personnel have been scheduled.
- Inspect the area(s) in which the event is to be held for appropriate set-up, including room size, chairs, tables, outlets, etc. Notify the event manager of any potential problems.
- At least one (1) hour before the event is to begin, meet with judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.

#### PRELIMINARY ROUND

- Prior to the conference, the event coordinator shall become familiar with the format of the exam (refer to the Competition Updates of the TSA website).
- 2. Late participants and/or entries are considered on a case-by-case basis and only when lateness is caused by events beyond the participant's control.
- 3. In order to compete, participants must be on the entry list or must have approval of the CRC.
- 4. Should the test be administered via scan-type answer sheet, proceed with the following steps:
  - a. Begin the event at the scheduled time by closing the doors and checking the entry list.
  - b. All participants should be in the room at this time
  - c. Participants registered but not present shall be disqualified.
  - d. In order to compete, participants must be on the entry list or must have approval of the CRC.
  - e. Distribute the answer sheet (scan-type) and paper.
  - f. Monitor the one (1)-hour written test.
  - g. Score the exams if needed.



#### CYBERSECURITY

- 5. Decisions about rules violations must be discussed and verified with the judges, event coordinator, and the CRC manager to determine either:
  - To deduct twenty percent (20%) of the total possible points in this round
  - To disqualify the entry

The event coordinator, judges and CRC manager must all initial either of these actions on the rating form.

- 6. Judges determine the twelve (12) semifinalists and discuss and break any ties.
- 7. Submit the finalist results and all related forms in the results envelope to the CRC room.

#### **SEMIFINAL ROUND**

- At least one (1) hour before the event is scheduled to begin, meet with semifinalist judges to review time limits, procedures, and regulations. If questions arise that cannot be answered, speak to the event manager before the event begins.
- Semifinalists report to the event area at the time and place noted in the conference program to sign up for a presentation time.
- 3. Semifinalists report to the event area at the time and place for the on-site challenge with:
  - Maximum of one (1) laptop, or other presentation hardware (e.g. I-Pad)
  - Extra charged laptop battery
- 4. Participants do NOT have access to electrical power/outlets during the event.
- 5. Participants do NOT have access to the Internet during the event.
- 6. Participants must have the presentation downloaded and accessible on their computers.
- 7. Participants may project their presentation via the projector (if available).
- 8. Participants are given ten (10) minutes to present, broken down as follows:
  - Three (3) minutes for the presentation
  - Five (5) minutes to respond to questions

- Discuss rule violations (e.g. 20% deduction, disqualification) and have all relevant parties initial the rating form.
- 10. Judges determine the ten (10) finalists and discuss and break any ties.
- 11. Submit the finalist results and all related forms in the results envelope to the CRC room.
- 12. Manage security and the removal of materials from the area.

