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## **Computer Game & Simulation Programming**

*Interactive computer games and simulation have achieved broad acceptance and implementation in a wide variety of business and educational disciplines. Buried within many of these programs is a message that advances the player's experience from simple entertainment to edutainment. This event tests the programmer's skill in designing a functional interactive simulation/game that will both entertain and educate/inform the player.*

### **Competencies**

The program must address the topic and is appropriate for the audience. Showing creativity and cohesiveness of design through game world graphics, text treatment, and special effects are extremely important. The user interface is intuitive and responsive to program operations. Navigation is logical and designed to lead the player to the intended objective. The program demonstrates a finished and well tuned product free of artifacts and glitches. Gameplay incorporates both entertainment and edutainment play within the specifications of the topic. Artistry, character, overall layout, color choice, and design should be creative and appealing to the target audience. The program contains some element of skill, chance, competition or random actions that will inspire replay more than once. Player interactions with other characters, objects, obstacles, and iconic graphics are appropriate to the topic and create a feeling of immersion within the game world. Storyline is sufficient to engage player and communicate a clear thought process and intended, planned direction with formulation and execution of a firm idea. The player tasks are non-trivial and receive appropriate rewards. Information should be effectively communicated in addition to following copyright laws.

The performance should demonstrate an understanding of the program logic and coding is evident. There should be an explanation of the tips, techniques, and tools that were used, including identifying the most difficult programming task(s) completed and an explanation of the scenario/logic used to overcome and implement these tasks. Furthermore, an explanation should be given of the program to indicate that it was logically and systematically developed. The performance should demonstrate good diction along with efficient voice quality that shows self-confidence apparent through knowledge of the content and articulation of data. Within the professional presentation, students should effectively answer questions.

#### **Career Cluster(s):**

Information Technology

#### **Business Education Curriculum Standard(s):**

Information Technology, Management

### **State Eligibility**

Each local chapter may enter two (2) programs. One member or a team of up to 3 members may create the program. The local chapter must be on record in the Pennsylvania state and the FBLA-PBL national offices as having paid dues by January 31 of the current school year. **Members participating in this event may not compete in another competitive event at a Region Leadership Conference.**

*In the event of a team entry, no more than one (1) member may have submitted a program for judging at a previous State Leadership Conference. A member who has submitted an individual entry may not compete again in this event.*

This event consists of two (2) parts: a prejudged program and a performance component. Participant(s) are required to complete both parts. The top 10 rated programs from among those submitted will be required to give an oral presentation at the SLC.

The Statement of Assurance must be submitted with the pre-judged program.

At the State Leadership Conference, the chapter adviser must confirm students' participation in the event. Participants who are not confirmed will be disqualified.

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## **State Regulations**

### **Prejudged Program**

1. The participant may choose any programming language or game/animation engine to create a stand alone executable program that will display creativity, programming skill, and convey the message of the topic.
2. Four (4) copies of the program must be submitted. The program must be submitted on DVD or USB flash drives. If submitting DVDs, each DVD must be in an individual own sleeve or jewel case. Label the media using a marker with the school name, participant name, state, and event. Students are reminded to double check all of the DVDs or flash drives to make sure that each runs; therefore, make sure that the DVD or flash drive is copied correctly. DVDs or flash drives that do not run will not be evaluated.
3. The program must contain minimally the following:
  - a. Minimum of five missions/tasks/levels to be completed before winning or completing the game.
  - b. Must be graphical in nature, not text based.
  - c. Must allow for at least a two player perspectives such as First Person, Third Person, Top-Down, Side-Scrolling, etc.
  - d. Must run on a Windows XP or higher computer, using the keyboard and mouse for player control.
  - e. An initial title page with the game title, user interface control instructions and active buttons for Play and Quit.
  - f. A quit command programmed to the escape key. This is needed if the player wants to end the game before completing.
4. All data and programs should be contained in a master folder named STATE\_SCHOOL where your state and school are listed in that folder name format. Outside of the master folder, create a shortcut to the executable file. If the program requires a runtime player, create a shortcut outside the master folder to launch the runtime player installer.
5. Readme files must be submitted as a hard copy and sent with the DVDs. Contained in the readme file is a statement noting the name of the participant, school and state; design software program(s) used and instructions on running the program and installing the executable and runtime program if needed.
6. "Readme" file information must be submitted on the "Statement of Assurance" along with copyright notations.
7. Data must be free of viruses/malware. Any entry with contaminated data will not be judged.
8. Program produced for this event must be prepared by the participant without help.

## **State Procedure**

### **Preconference Requirements**

1. The participant(s) must submit the following items:
  - a. An event entry form, which is posted on the PA FBLA web site, certified by the local chapter adviser.
  - b. Four (4) copies on DVD or USB flash drives of the prejudged program. Each DVD must be in its own sleeve or jewel case. The media should be labeled in marker with the school name, participant name, state, and event. Students are reminded to double check all of the DVDs or flash drives to make sure that each runs; therefore, make sure that the DVD or flash drive is copied correctly. DVDs or flash drives that do not run will not be evaluated.
  - c. Statement of Assurance.
2. The materials must be received by the PA FBLA Executive Director/State Chairman by the deadline date published at [www.pafbla.org/importantdates.php](http://www.pafbla.org/importantdates.php), which is posted on the PA FBLA web site. Failure to submit these documents by the received by date will result in the participants being disqualified.

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## **Conference Requirements**

### **Oral Presentation**

1. Performances should describe the program completely. Specifically, the performance should address the program creation, processes used, and results of the program.
2. The top ten (10) individuals or teams will be scheduled for a final presentation at the SLC.
3. Presentation of the entry must be conducted by participants who authored the event. In the case of a team event, at least one author must give the presentation. However, all team members who wish to be recognized as state winners must register for the SLC. No replacements or substitutes will be allowed.
4. The participant(s) must provide all equipment for the presentation, including a copy of the program.
5. Five (5) minutes will be allowed to set up and remove equipment or presentation items.
6. The participant(s) is responsible for bringing a copy of the program.
7. The individual/team has seven (7) minutes to present the case describing the program. A timekeeper will stand at the end of six (6) minutes and again at seven (7) minutes. When the presentation is finished, the timekeeper will record the time used, noting a deduction of five (5) points for any time over seven (7) minutes.
8. Following each presentation, judges will conduct a three (3) minute question-answer period.
9. Performances are open to conference members.
10. The presentation will constitute 30 percent of the final score.
11. Visual aids and samples related to the project may be used; however, no items may be left with the judges or audience.
12. **The participants must comply with the PA FBLA Dress Code which can be found at [www.pafbala.org/dresscode.php](http://www.pafbala.org/dresscode.php). If the participants do not comply, the participants will not be admitted to the performance area until he or she is in compliance.**

## **State Judging**

Reports will be screened to determine if chapters have complied with event eligibility and regulations. A panel of judges will then select the winners, and all decisions of the judges are final.

If there is a tie after the pre-judged program in order to determine the top 10 finalists for the SLC, ties will be broken based on the following:

#### **First Tiebreaker**

- Total points of the *Game Play Evaluation* section on the rating sheet.

#### **Second Tiebreaker**

- Total points of the *Game Concept and Design Evaluation* section on the rating sheet.

#### **Third Tiebreaker**

- Total points of the "Storage media, uploaded folder, and shortcuts formatted properly" category within the *Program Usability and Support* section on the rating sheet.

If there is a tie after the pre-judged program portion and the oral presentation portion of the event, ties will be broken based on the following:

#### **First Tiebreaker**

- Total points of the *Pre-judged Program rating sheet*.

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### **Second Tiebreaker**

- Total points of the *Content* section on the rating sheet.

### **Third Tiebreaker**

- Total points of the “Demonstrates the ability to effectively answer question” section within the *Delivery* section on the rating sheet.

Tiebreaker implementation examples can be found in this handbook or at [www.pafbلا.org/tiebreakers.php](http://www.pafbلا.org/tiebreakers.php).

## **State Awards**

The state will present a maximum of ten (10) awards at the State Leadership Conference.

## **National Conference Eligibility**

The first- and second-place award winning projects at the State Leadership Conference are eligible for entry at the National Leadership Conference. All NLC qualifiers will be expected to present a seven-minute (7) oral presentation of the project at the NLC. Advisers and participants should refer to the latest edition of the National Chapter Management Handbook for official National Leadership Conference event guidelines.

In the event that the local chapter of the first- or second-place winning project cannot attend the National Leadership Conference or does not wish to have its project submitted for competition at the National Leadership Conference, it is the responsibility of the:

### **local chapter adviser**

- to contact the PA FBLA Executive Director/State Chairman about not participating at the National Leadership Conference.

### **PA FBLA Executive Director/State Chairman**

- to contact the next eligible award winner about participating at the National Leadership Conference.



# COMPUTER GAME & SIMULATION PROGRAMMING

## Production Rating Sheet

Evaluation Item	Not Demonstrated	Does Not Meet Expectations	Meets Expectations	Exceeds Expectations	Points Earned
<b>Program Usability and Support</b>					
Storage media, uploaded folder, and shortcuts formatted properly	0	1-3	4-7	8-10	
Instructions clear and executable launches from shortcut without modification	0	1-3	4-7	8-10	
<b>Game Play Evaluation</b>					
Quality of Rules—rules presented well and player knows what to do	0	1-3	4-7	8-10	
User Interface—game controls are easy to use without much explanation	0	1-3	4-7	8-10	
Navigation—the player can get to the end of game and knows how to get there	0	1-3	4-7	8-10	
Performance—no errors, bugs, or glitches	0	1-3	4-7	8-10	
Play—game is challenging, the game can be completed	0	1-3	4-7	8-10	
Artistry—color, backgrounds, characters, sounds are attractive and visible	0	1-3	4-7	8-10	
Player Interactions—player participates in the story and the actions are consistent with the concept	0	1-3	4-7	8-10	
Plot Complexity—game tells the story, player is guided to find a resolution to the problem at the beginning of the game	0	1-3	4-7	8-10	
Rewards—player is rewarded properly for taking game risks	0	1-3	4-7	8-10	
<b>Game Concept &amp; Design Evaluation</b>					
Fully addresses concept and topic	0	1-5	6-10	11-15	
Game play and graphics appropriate for concept and age group	0	1-3	4-7	8-10	
Incorporates entertainment and education elements	0	1-3	4-7	8-10	
Title slide is attractive with working direction, quit, and start buttons	0	1-3	4-7	8-10	
Contains all levels required	0	1-3	4-7	8-10	
Errors did not crash game or prevent continuing game play	0	1-3	4-7	8-10	
Code is well written and logically designed	0	1-5	6-10	11-15	
Code or game engine events are well commented to explain logic used and reason for a block of code	0	1-3	4-7	8-10	
<b>Subtotal</b>	<b>/200 max.</b>				
<b>Penalty Points</b> Deduct five (5) points for not adhering to Guidelines (maximum of fifteen [15] points). <input type="checkbox"/> 4 copies of media not received <input type="checkbox"/> Statement of Assurance not received <input type="checkbox"/> media labeled incorrectly					
<b>Total Points</b>	<b>/200 max</b>				

Name: \_\_\_\_\_

School: \_\_\_\_\_ Region: \_\_\_\_\_

Judge's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Judge's Comments:

VERIFICATION & INITIALS  
(scores checked for accuracy)

Co-Competitive Events Coordinator \_\_\_\_\_



# COMPUTER GAME & SIMULATION PROGRAMMING

## Performance Rating Sheet

Evaluation Item	Not Demonstrated	Does Not Meet Expectations	Meets Expectations	Exceeds Expectations	Points Earned
<b>Content</b>					
Describes the problem	0	1-2	3-4	5	
Describes the planning process used to design the program	0	1-3	4-7	8-10	
Describes program documentation	0	1-3	4-7	8-10	
Describes input/output and program parameters	0	1-5	6-10	11-15	
Describes how the program flows	0	1-7	8-14	15-20	
Describes program structures	0	1-5	6-10	11-15	
Describes the usefulness of the program	0	1-2	3-4	5	
<b>Delivery</b>					
Thoughts and statements are well-organized and clearly stated; appropriate business language used	0	1-2	3-4	5	
Demonstrates self-confidence, poise, and good voice projection	0	1-2	3-4	5	
Demonstrates the ability to effectively answer questions	0	1-3	4-7	8-10	
<b>Subtotal</b>					<b>/100 max.</b>
<b>Time Penalty</b> Deduct five (5) points for presentation over seven (7) minutes. Time: _____					
<b>Dress Code Penalty</b> Deduct five (5) points when dress code is not followed.					
<b>Penalty</b> Deduct five (5) points for failure to follow directions					
<b>Total Points</b>					<b>/100 max.</b>
<b>Prejudged Score</b>					<b>/200 max.</b>
<b>Final Score</b> (add total points and prejudged score)					<b>/300 max.</b>

Name: \_\_\_\_\_

School: \_\_\_\_\_ Region: \_\_\_\_\_

Judge's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Judge's Comments:

VERIFICATION & INITIALS  
(scores checked for accuracy)

Chief Administrator \_\_\_\_\_

Official Checker \_\_\_\_\_