
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 is 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 an 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 and explain 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.

Career Cluster(s):

Business, Management, and Administration; Information Technology

Business Education Curriculum Standard(s):

Information Technology, Management

State Eligibility

Each local chapter may enter two (2) programs. Only one member 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.**

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.

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

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 and each DVD must be in their own sleeve or jewel case.
3. The program must contain minimally the following:

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- 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. Must run on range of 1024x780 or higher.
4. Four (4) DVDs containing the executable object, data or support files needed to run th executable file must be submitted. Also, the Statement of Assurance and a readme file must be submitted. Each DVD must be labeled with the school, participant name, state, and event. The readme file must be in hard copy format.
 5. 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. If the program requires a runtime player, create a shortcut outside the master folder to launch the runtime player installer.
 6. 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.
 7. Program must include an initial title page with the game title, user interface control instructions, and active buttons for Play and Quit.
 8. Program must include a quit command programmed to the escape key. This is needed if the player wants ot end the game before completing.
 9. Program must run on Windows XP or higher computer.
 10. Data must be free of viruses/malware. Any entry with contaminated data will not be judged.
 11. 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 of the prejudged program. Each DVD must be in its own sleeve or jewel case.
 - 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, 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.**

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 will be scheduled for a final presentation at the SLC.
3. The participant must provide all equipment for the presentation, including a copy of the program.
4. Five (5) minutes will be allowed to set up and remove equipment or presentation items.
5. The judges will interact with the participant during the presentation.

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6. The participant is responsible for bringing a copy of the program.
 7. The individual 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. Performances are open to conference members.
 9. The presentation will constitute 30 percent of the final score.
 10. Visual aids and samples related to the project may be used, however, no items may be left with the judges or audience.
 11. **The participants must comply with the PA FBLA Dress Code which can be found at www.pafbla.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 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*.

Second Tiebreaker

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

Third Tiebreaker

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

Tiebreaker implementation examples can be found in this handbook or at www.pafbla.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
Program Readability and Support					
Storage media, uploaded folder and shortcuts formatted properly	0	1–2	3–4	5	
Source code or ANSI flowchart identifies core programming with adequate commenting to identify intent of programming blocks	0	1–3	4–7	8–10	
Instructions clear and executable launches from shortcut without modification	0	1–2	3–4	5	
Program Structure and Game Play					
Program addresses the topic	0	1–3	4–7	8–10	
Required information is effectively communicated and is appropriate for the audience	0	1–3	4–7	8–10	
User interface is intuitive and responsive to program operations	0	1–3	4–7	8–10	
Navigation is logical and designed to lead the player to the intended objective	0	1–5	6–10	11–15	
Game play incorporates both entertainment and edutainment play within topic specifications	c	1–3	4–7	8–10	
Game world graphics, text treatment, and special effects show creativity and cohesiveness of design	c	1–3	4–7	8–10	
Artistry, character, overall layout, color choice and design is creative and appealing to the target audience	0	1–3	4–7	8–10	
Program contains some element of skill, chance, competition or random actions that will inspire replay more than once	0	1–3	4–7	8–10	
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	0	1–5	6–10	11–15	
Storyline is sufficient to engage player and communicate a clear thought process and an intended, planned direction with formulation and execution of a firm idea	0	1–5	6–10	11–15	
Player tasks are non-trivial and receive appropriate rewards	0	1–5	6–10	11–15	
Program Implementation and Tuning					
Program demonstrates a finished and well tuned product free of errors, artifacts and glitches	0	1–3	4–7	8–10	
The program handled user and/or data input errors well	0	1–3	4–7	8–10	
Appropriate logic and data types used	0	1–3	4–7	8–10	
Algorithms reliable and straightforward	0	1–3	4–7	8–10	
Unusual approaches should be well documented	0	1–3	4–7	8–10	
Resulting outputs, screens, and messages were useful	0	1–3	4–7	8–10	
Subtotal	/200 max.				
Penalty Points 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 <input type="checkbox"/> no readme file _____					
Total Points	/200 max				

Name: _____
 School: _____
 Judge's Signature: _____

VERIFICATION & INITIALS (scores checked for accuracy) <input type="checkbox"/> Co-Competitive Events Coordinator _____

Judge's Comments:



COMPUTER GAME & SIMULATION PROGRAMMING

Performance Rating Sheet

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

Name: _____

School: _____ Region: _____

Judge's Signature: _____ Date: _____

Judge's Comments:

VERIFICATION & INITIALS
(scores checked for accuracy)

Chief Administrator _____

Official Checker _____