Challenge Description
One of the most lucrative genres of gaming for the last several years has been in the area of sports simulations. Your task (should you choose to accept it) is to create a game that might be part of the 2050 Olympic Games. As usual, your imagination is key. A good start would be to look at the list of sports currently approved for the 2006 Olympics (start at http://www.olympic.org/uk/sports/index_uk.asp) and imagine what they would be like if played in zero gravity, with currently unavailable high-tech equipment, or if modifiable robots were allowed to compete. Of course, you are not limited by this list of sports; feel free to create a sport from scratch if you prefer.

While the user interface will be of paramount importance for this challenge, high quality or complicated graphics are not. For example, one of the first games produced for the IBM PC’s was called Decathlon. The graphics were fairly simple with overhead views of running tracks and static person figures to represent the athletes. What made the game a classic, however, was the fact that the actions taken by the computer player in many ways represented the actions that would be taken by the real athlete. The 100 m dash, for example, required that the computer player hit two keys alternately with each key press representative of a leg movement. The faster that the computer player could hit the keys correctly, the faster the character on the screen would move.

Scoring
Scoring for the different categories will be based on, but not limited to, the following:

**User interface / software usability**
As previously stated, the user interface for this type of game can be anything from purely text-based to a fully graphic design. The important aspect of this category, however, is the ease of use by the human player. In other words, how easy is it for the player to get the game to function in a reasonable manner? This includes the keys or commands used, how quickly the player can get used to the interface, and how logical the interface design is. In addition, this particular challenge will look at the similarity of the player’s actions to the way the sport would be played. The game should also check for minor errors and be able to deal with them without affecting the flow of the game.

**Originality**
This category is probably the vaguest. All aspects of your game could have elements that display originality and creativity. For this particular challenge, a good deal of originality will be the main theme behind your game. Is it compelling? Does it make the player want to continue playing? But aside from just the theme (the sport you design), originality can be displayed in any number of other ways. The coding technique for solving some
particular problem could be original or the screen layout could be different (yet effective).

**Technical merit**

Scoring for this category is based on your code and system design. The code should be efficient, concise, and well commented. Your design should break down the problems into manageable chunks and the code should reflect the design by using appropriate structures such as classes. Your coding style should be consistent throughout. The game should also run as bug-free as possible. If there are bugs left in the game, then you should document these and explain why you chose to leave them in or could not fix them. Again, any elements of technical merit that you wish to highlight should be noted in the presentation.

**Presentation quality**

*Your presentation should be in the form of a sales pitch to prospective publisher of your software.* This means that you need to convince them that your game is worth them spending millions of dollars to market and distribute.

When you give your presentation to the judges, they will be looking for content and presentation quality. You should speak clearly, make eye contact with the audience, and know your topic without the need to read from a prepared speech (although notes are acceptable). Other things that the judges will be looking for include body language (don’t fidget), logical organization of the presentation, visual aids such as screen shots or running examples of the portion of the game being discussed, team involvement, and your ability to respond to questions. Not every member of your team must participate in the presentation although you will be judged on teamwork, so inclusion is a plus.

**Documentation**

The documentation for the challenge needs to be in several forms. First, a manual of how to play the game should be provided. Also, you should keep track of who worked on what parts of the game and approximately how much time each person spent on each component. Don’t wait until the end to make these items up, it is best to put in place a process for keeping track of who worked on what for how long. It is also not a bad idea to write the manual before you write any code. This lets you decide how the game will be played and what actions will be possible. Writing the code to make that happen then becomes much more focused. It’s ok if the game doesn’t turn out the way you had hoped when you wrote the manual; just edit the final version of the manual to be correct. You should, however, also document what changes you made and why. The purpose of this kind of documentation is to know how things changed over time and why so that you can plan better in the future. Another element of that is documenting your original design and keeping track of design changes as the project progresses. Finally, commenting your code is also part of documentation. Comments should be clear and be used throughout. Copies of your documentation, along with any changes made, should be brought with you on the day of the competition and given to the organizers or a judge as soon as you check in. It is helpful to have a printed copy as well as a digital copy on CD. The following items should be turned in as documentation items:

- Complete code for your game
• Game Manual
• List of known bugs with explanations
• Design document
• Changes to the design that were needed and why
• Work documents tracking team member participation (an example will be available on the web shortly)
• Things that you would improve or do differently if given the chance
• All of the above in digital format on a CD

The format of these documents is not important. What is important is that you convey the information in a clear manner.

Teamwork
Teamwork is one of the most important skills that a person can learn. It is also one of the toughest to do well. This category will be judged based on how well your group works as a team. This includes how your team organized itself, how well the members of your team seem to work together, how involved each team member is in the project, and how motivated the team, as a whole, is. Team spirit will also play a role in the final score.

Challenge Schedule (tentative)
9:00 AM       Check in and Setup
10:00         Introduction and Welcome
10:15         Open Display and judging (specific times for judging your team will be handed out when you check in)
12:00 PM      Lunch
1:00          Open Display and judging continues
2:45          Judges gather to discus and determine winners; participants will take a tour of the campus and FedEx Institute of Technology
3:30          Awards announced
4:00          Closing and Thank you

Questions
Any questions or concerns should be directed to:
Lee McCauley     Phone: 678-2486   Email: mccauley@memphis.edu
Linda Sherrell    Phone: 678-3139   Email: sherrell@cs.memphis.edu