



Local students try modeling and simulation tech

The Virginian-Pilot
© October 16, 2009

By Jaedda Armstrong

Surrounded by a group of fellow high school students, Matthew Kelly stared hard at the computer as he pondered the geometry question on the screen. If he wanted to sucker punch his virtual opponent and win the game, he had to answer correctly.

What do you call two nonvertical lines that never intersect?

"Parallel lines!" someone shouted.

Kelly clicked the answer, and his virtual player slammed his fists into the opponent's face.

"That was cool," Kelly said, after receiving applause from the small crowd.

Kelly, a junior at Granby High School in Norfolk, had just defeated "Brain Buster," a computer game created by a graduate student at Norfolk State University. The game was just one example of modeling and simulation on display at this year's ModSim World Conference and Expo at the Virginia Beach Convention Center.

The event, which started Wednesday and runs through today, showcases how modeling and simulation technology can be used to improve processes in many fields, including education and health care. The event attracted 25 exhibitors and at least 800 registrants.

Tidewater Community College brought about 250 local high school students to the event Thursday to learn about careers in the growing industry. Industry leaders are working to attract students to the field, which has created more than 2,000 jobs in Hampton Roads with salaries averaging about \$80,000 a year, according to one study.

"The purpose of the event is to get these kids excited about modeling and simulation and let them know what courses they need to be taking," said Jody Strausser, head of TCC's modeling and simulation certificate and associate's degree program.

The conference emphasized gaming with youth-friendly attractions including hands-on gaming exhibits, and speakers such as an astronaut and a video game developer.

"Making a game is not as easy as it sounds," said Terin Reed, the creator of "Brain Buster," the fighting game that quizzes players on subjects such as the periodic table and binary numbers. As you answer each question correctly, your virtual character punches the other player. It took him two

years to create the game, he said. "Students need to get good grades in math and science, and start thinking in a logical manner."

High school students interested in modeling and simulation should take computer science and high-level math courses such as calculus, Reed said.

Lucas Walker, a sophomore at Gloucester High School in Gloucester County, spent most of the morning in defense contractor Northrop Grumman's virtual training system. The company designed a war zone on a huge computer screen that covered the walls in a room, and Walker virtually drove a Humvee through the desolate and rocky roads of Afghanistan. Soldiers formerly deployed there helped the designers create the simulation by describing the actual environment and where improvised explosive devices are most likely to be hidden.

As Walker drove the virtual Humvee, a dead animal appeared on the road ahead.

"Wait, it might be a trap!" a student yelled as the Humvee suddenly went up in flames and virtual blood hit the screen.

The animal hid an explosive device.

"This simulation helps soldiers learn what the danger signs are before they get out there," said BJ Jones, a Northrop Grumman senior manager.

Over at another booth, Magan Cola, a nursing student at Norfolk Technical Center, was shocked to see how modeling and simulation can be used in health care. Her eyes grew as she watched a video of students practicing heart surgery on a electronic mannequin.

"That seems like very good training," said Cola, who plans to apply to Old Dominion University's modeling and simulation certificate and bachelor's degree program in medical technology, after speaking with ODU students at the conference.

"I'm all excited now," Cola said, smiling as she grabbed a brochure.

Jaedda Armstrong, (757) 222-5846, jaedda.armstrong@pilotonline.com