

Interface

Seniors Make a Splash with Deflection

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In Fall 2004 the new senior capstone class led by Dave Powell created a computerized version of the board game Deflection. The game was created by David Taylor of Greensboro, NC in 1989. In it players try to capture each other's game pieces through strategic moves.

Each member of the class took on a specific production responsibility, and the team saw the project through from conception, design, implementation, and user testing. They gained hands-on experience to better prepare them to enter the workplace.

The game includes the graphical interface that is seen here, and it includes artificial intelligence strategies for user-computer play.

The team distributed CD's of the game in the Moseley Center to establish a user base. Approximately 100 preview edition games were distributed. The group also held a Deflection tournament, to encourage people to play the game as well as to test the software.

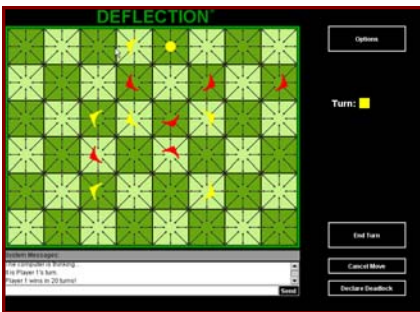
The game has been so successful and the experience so innovative that the group has received much acclaim for their efforts. In addition to having articles in this newsletter and Elon's E-news, the team was given a spot on the local news on Fox. The university community as well as the local community realizes what an outstanding accomplishment this group has made.

You are invited to:

- Visit the Deflection website, <http://www.cs.elon.edu/deflection/>
- Download the game and play for yourself
- See a movie of game play
- Read the news stories on the Deflection group



The Deflection Team: (left to right): Ryan Markel, Michael Richards, Joe Torralbes, Aaron Christmas, Jeff Houston, Ryan Barnard, Trevor Kelly, Avery Edwards, and Pramote Malasitt.



Screen shot of the Deflection software.

From the Chair

Dr. David Powell

What a great year! The Elon students and faculty have continued to raise the bar with outstanding improvements in curriculum and student performance. The curriculum was improved with the addition of a BS in Information systems, paid student research for four seniors in grid computing, the first time offerings of 400 level classes in Game Programming, Artificial Intelligence and Software Development, and the use of Cold Fusion for Web Development. The department is the only department in North Carolina that offers both a BS and BA in computer science and information systems. This gives the students the tremendous opportunity to experiment and take complementary courses in both tracks. The student performance has objectively improved by higher scores in the ETS test, higher finish in the Southeast Regional Programming contest and higher participation in the student chapter of the ACM. Calendar year 2005 offers more exciting improvements with a new course called Perspectives in Computer Science and a new course called Intelligent Decision Making that will use grid computing on Elon's new eight machine grid.

Faculty Grants



The following grants have recently been acquired by the Computing Sciences faculty:

- **Heinrichs and Powell** have acquired \$137,058 from the National Science Foundation's Computer Science, Engineering, and Mathematics Scholarship Program in order for Elon to give scholarships for both Computer Science and Computer Information Systems. Ten \$3,125 scholarships were given to first year students entering in the fall.
- **Hollingsworth and Powell** received a grant from the University of North Carolina for creating a course on high-performance computing. The grant was given to partner seven North Carolina universities together in this endeavor. Elon was given \$91,794 of a total \$650,000 grant to fund this project.

New Computer Sciences Courses Offered



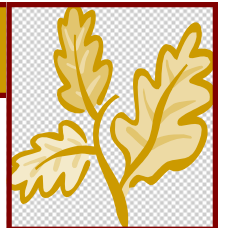
Students in Graphics and Game Programming study and critique video games.

This year Computer Science has added a few new and exciting courses. In addition to the new Capstone course featured on page one, there are also two new electives: Artificial Intelligence and Graphics and Video Game Programming. Each class was very successful. Students were able to get the theory as well as hands-on experience in these areas. Artificial Intelligence projects included robots learning to play basketball, genetic algorithms that learn to create art, computer-generated music, and character recognition using neural networks. Final projects in the Graphics and Video Game Programming class were just as impressive. These student-created video games included adventure games, shooting games, and scrolling games.

These classes will be offered in the future on alternate fall se-

External Review

The Computing Sciences Department had an external review from Dr. Kenneth Martin from the University of North Florida on September 19 and 20, 2004. He is a former president of ABET, and the department had the great fortune of getting his assessment. He met with departmental faculty as well as several university administrators in order to define the areas in which the department excels and those in which it needs improvement. As a result, the department has gained outside perspective and reworked the goals for our program for the upcoming years.





Attention Alumni — We Need Your Help!

The staff of Interface would like to begin sending this newsletter in electronic format. We would also like statistics on where our graduates are and a hindsight view of your experience here at Elon. To do this, we need e-mail addresses and feedback. The easiest way to help is to **go to <http://www.cs.elon.edu/alumnisurvey/> and take the survey!** You may also e-mail us at csnewsletter@elon.edu. Be sure to include:

- Any alumni news we can report in the next newsletter
- Employment opportunities for current graduates that we can advertise
- Internship possibilities for current students
- Updates on your contact information.

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Thank you!!!

ACM Student Happenings



Programming Contest Team members work out problems.

Programming Contest:

Joel Hollingsworth prepared and coached two Elon teams and accompanied them to Duke University on November 13, 2004 as they participated in the ACM Mid-Atlantic regional programming contest. The first team, Phoenix I, composed of Ryan Barnard, Avery Edwards and Michael Richards, finished in 22nd place out of 161 teams (top 14%). The team was the first team to solve a problem and led everyone for the first 30 minutes. The second team, Phoenix II, composed of Matt Holt, Eric Hydrick and Nathan Shemon-ski, finished in 99th place of 161 teams (top 61%).

Student Opportunities

Association of Computing Machinery

Programming Contest

Elon College Fellows Program

Internships

Research

Conferences:

This fall, a record number of students attended a local Computing Sciences conference. Ten students were accompanied by Shannon Pollard to Spartanburg, SC for the Consortium of Computing in Small Colleges. Students attended research talks and the programming team got a chance to warm up their programming skills. It was a very successful trip overall.

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Undergraduate Research and Awards

SURF presentations: Spring, 2004

- Joseph Magyar worked with Megan Conklin on Discovering Complex Networks in Open Source Project Development Teams
- Ryan Barnard presented Arbitrarily Extensible Ant Colony Optimiaztion under the supervision of Joel Hollingsworth
- Jeffrey Houston, under Joel Hollingsworth, presented A Visual Editor for the Creation of 3-Dimensional Game Environments

SURE projects: Summer, 2004

- Eric Hydrick worked with Lynn Heinrichs on Automatic Spam Filtering.
- Michael Richards, under the supervision of Shannon Pollard, worked on Learning Natural Language Mappings

Other summer research was conducted by Avery Edwards and Pramote Malasitt under professors Dave Powell and Joel Hollingsworth. They investigated the application of decision analysis tools to grid computing.

Student Awards for 2003-2004 year:

- Computer Science Academic Achievement: Philip Pigg
- Computing Sciences Department Service: Ryan Markel
- Elon University Programming Contest: Matthew Lane
- Information Systems Academic Achievement: Shannon Kilgariff
- Carpenter Award: Avery Edwards

Congratulations on your Achievements!