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Duffield Showcases BOOM Technology

By [Archives](#)
Mar 8 2006

The next time prelim-cramming and paper-writing starts to take a toll, instead of taking a coffee break, how about relaxing with a game of Penguin Adventure? This latest computer game, designed by Eric Del Priore '07 and Benjamin Sprattler '07, along with fellow students in CIS 300: Introduction to Computer Game Design, was one of many digital technology research projects showcased at the 2006 Bits On Our Mind exposition.

Held in the Duffield Hall Atrium yesterday evening, BOOM is an annual research conference organized to highlight student research projects in digital technology. BOOM projects focus on digital technology applications in diverse areas ranging from art and biology to robotics and gaming.

Inspired by the original Super Mario Brothers and Sonic the Hedgehog games, the Penguin Adventure project grew out of a desire for "making video games that we wanted to play," Sprattler said. The game consists of controlling Toons the Penguin, a whimsical character with a colorful umbrella, designed by Lisa Allen '07, through a series of five different worlds as he tries to find his mother. Sprattler wanted to create a game that was "fast, where you had no time to realize you were thinking."

Del Priore explained that their project focuses on "twitch game play," where players are forced to react quickly while playing, without thinking about their every move.

"The game is not hard," he said, "but encourages and requires speed." Del Priore also wanted to create a game where "players always feel that they were succeeding."

"Our aim was to keep the target audience out of the hard-core gaming male, 20 to 25-year age range," Sprattler said. When Penguin Adventure was showcased last semester at the end of the course, the creators found that the game was popular among children.

"A ten-year-old girl won one of the free t-shirts we were giving away," Sprattler remembered.

"The game is geared towards kids," Del Priore agreed, noting that its popularity may stem from the fact that "there is no way to fail in the game."

Sprattler and Del Priore, who hope to work in the gaming industry after college, plan to modify the existing Penguin Adventure. The game has already received much positive response, garnering 1,500 downloads from their website.

The conference, however, was not all fun and games. Several of the other projects aimed to address pressing medical and environmental issues. For example, MagnoFly, developed by Brendan Rehon grad and James A. Ferwerda, research associate at the Computer Graphics Center, is a game-based tool to screen for dyslexia. Drawing from research on magnocellular pathways in the brain and their role in dyslexia, Ferwerda and Rehon developed a simple computer tool that tests players' magnocellular function. The game begins with four blocks of flies swarming on the screen; three of the four blocks of flies are moving in a random pattern, while one block depicts flies swarming in an aggressively directed motion towards a picture of a baby. The player's goal is to spray the flies moving in a singular direction before they begin to harm the baby.

"The game analyzes a player's visual processing task ability," Rehon explained. A significant failure to detect the one block of flies swarming in the direction of the baby may indicate dyslexia. Rehon added that the tool "hasn't actually been tested on people yet, or undergone clinical trials. It is theoretical, based on research papers."

But the game may have important value, especially because it can screen "pretty young individuals, anyone who can deal with a mouse and other computer procedures," Rehon said. If dyslexia is screened earlier in individuals, appropriate measures can be taken once the child begins to attend school.

As part of his final project for CS 473: Practicum in Artificial Intelligence, Jonathan Wielicki '07 and his partners focused on examining the parameters needed for a stable environment. His project depicted a fish bowl complete with fish, predators and food. Wielicki was interested in flocking patterns exhibited by the fish, in response to food sources and the presence of predators. Although he found that "flocking didn't really help the fish in surviving" he noticed that "when predators were far away and couldn't see far enough to notice the fish, they starved and died."

"I was kind of interested in predators and prey," Wielicki said, adding that his project tested "the importance of a careful balance of variables in the environment."

Other projects on display at BOOM included a data "visualization" device aimed at aiding the visually impaired interpret data and hear graphs, a cloth simulation device aimed at creating more realistic looking textile representations in animated films, and the CUSat, the effort of around 85 students in the mechanical and aerospace engineering departments to build an autonomous in-orbit inspection satellite system.

"Computing and information science are increasingly important across all disciplines," said Prof. Hod Lipson, mechanical and aerospace engineering and faculty advisor of BOOM 2006, in a press release.

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Ithaca, New York



- Clear sky
- Temperature: 77 °F
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- Rel. Humidity: 57%
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BOOM 2006 was sponsored by Credit Suisse and Bloomberg and presented by the faculty of computing and information science.

Archived article by Samira ChandwaniSun Staff Writer

By Archives at Mar 8 2006 - 8:00pm

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