

UAT DEGREE PROGRAMS

THE COLLEGE OF MULTIMEDIA

Earn a Bachelor or Associate of Arts in Multimedia degree in the following majors:

- > Digital Animation
- > Digital Art and Design
- > Digital Video
- > Game Art and Animation
- > Game Design

THE COLLEGE OF SOFTWARE ENGINEERING

Earn a Bachelor or Associate of Science in Software Engineering degree in the following majors:

- > Artificial Life Programming
- > Computer Forensics
- > Game Programming
- > Network Engineering
- > Network Security
- > Robotics & Embedded Systems
- > Software Engineering
- > Web Architecture

TECHNOLOGY MANAGEMENT

Earn a Bachelor or Associate of Science in Technology Commerce degree in the following major:

- > Technology Management

GRADUATE COLLEGE OF APPLIED TECHNOLOGY

Earn a Master of Science in Technology degree with concentration in the following areas of study:

- > Artificial Life Programming
- > Game Production
- > Information Security
- > Software Engineering
- > Technology Management
- > Technology Studies

More online at www.uat.edu/majors

Holiday Tree Hacked!

Walking by the holiday tree on the first floor of UAT's main building, you marvel at the holiday glow the lights exude. But suddenly, the shine flickers off. Confused, you do a double-take. And in the time you turn around, the lights are back - sliding up and down the tree like a luminescent rocket ship. 'What the heck

is going on?' you wonder aloud, rubbing your eyes. It's not an optical illusion, but a computer illusion. Robotics Instructor Ryan Clarke and several students hacked the tree's lights so that they can be controlled via Internet. Users can manipulate the tree's lights to turn on, off and move in a scrolling pattern from any Internet connection.

The tree light hack started off on a Friday as a random thought by Clarke, but turned into a two-day project. They worked deep into the night, stopping for sleep before whiling away the weekend towards completion. The group split, working separately on the tree hack and the website to control it. One group literally went into the tree (for about 90 minutes), spliced the pre-lit tree wiring with the relays and using extension cords. The others worked on the website, communication with the web server and broadcasting the webcam feeds on the tree.

"Tapped" into the lights are eight solid state relays controlling current voltage and a 16-bit microcontroller (the size of a floppy disk), interfacing with a 32-bit web server (slightly smaller than a dollar bill). Before the group could set up adequate protection, their hack was hacked. The website received a DoS (denial-of-service attack) from Norway. Less threatening, a website user managed to get the lights to flash a "SOS" signal. Clarke recalled a conversation with his significant other, telling her he had to "reboot the tree."

Future plans for the tree include adding a speaker with a trigger, a sound meter that determines the rise of the scrolling pattern, and a guestbook to log visitors' locations.

