FOCUS

STAR WARS STRIKES BACK
See one take on the big summer nerd-fest. Yoda is sure to impress and a not-so-suprising move to the Dark Side materializes. **Page 9**

TECH BASEBALL ROCKS THE ACC
Check to see if your favorite player is a first-team All-ACC selection for the Jackets, who are seeded No. 2 overall in the NCAA Tournament. **Page 16**

Tech students win at Microsoft Imagine Cup

By Joshua Cuneo
Online Editor

If you're a Computer Science major at Tech, one of the first things drilled into your head is that Microsoft is bad and open-source distribution software is good. But two graduate students from the College of Computing would beg to differ: not only are they passionate about Microsoft technology, they demonstrated their passion by taking first place for their region at the Microsoft Imagine Cup Software Design Invitational last month.

Peter Pesti and John Gibby, first and second-year master's students in Computer Science respectively, developed and submitted a mobile location-based application called mGraffiti. This program allows users to store text messages at any point on a global map covered by Microsoft's Terra Server, creating virtual "hot spots" that can be accessed and read by other users.

"Originally, the purpose was just to [create] a fun thing for people to use with their PDA and to promote communication and sort of a sense of community between people that don't even know each other," Gibby said. "People will read other people's graffiti and communicate. You might read something that somebody left two years ago, and you sort of feel like you know that person a little bit."

Later, Gibby said, they realized it could have other uses, including keeping maintenance records for telephone and electrical companies or providing disaster assistance.

"[You can] use the hot spots in various geographic regions to...put notes about what needs to be done, what kind of needs people have, what kind of medical supplies need to be delivered to certain places," he said. "So the product is actually a framework for a lot of information sharing applications that are geographically based."

Microsoft Corp.'s U.S. National Imagine Cup Software Design Invitational is one of nine annual invitationals that call on students to develop advances in global technology using Microsoft software. The Software Design Invitational focuses on technologies that dissolve the

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boundaries between people through the use of Microsoft's .NET Framework and various web services.

The Software Design Invitational is separated into two rounds, with the regional finals in the morning and the national finals in the afternoon. Teams from all over the country received an all-expense-paid trip to Redmond, Wash., home of Microsoft headquarters, for the competition. The national winners will attend the world finals in Yokohama, Japan, in July.

Now in its third year, the Imagine Cup also includes invitationals in algorithms, information technology, office design, rendering, short film, technology business plan, visual gaming and web development.

Gibby and Pesti decided to enter the competition early last semester when Pesti heard about the Imagine Cup through a mailing list. The two were enrolled in a special topics class called Advanced Internet Application Development and saw an opportunity to make use of the material.

"We decided to go for the Imagine Cup and give it as a class project," Pesti said. "So, basically, [we] hit two birds with one stone."

The two stumbled onto the idea of a mapping application while cruising Microsoft and university research sites. They noticed that Microsoft had taken an interest in location-based services, an area of research that their advising professor informed them was particularly active. But developing the idea turned out to be the easy part.

"We started out blindfolded, because there are many elements of the project that we eventually used that we didn't know at first...if we could," Pesti said. For example, the team eventually acquired a laptop and four PDAs from the CoC, hardware that they hadn't originally planned on taking to the competition.

In addition, the team had to become proficient in several applications to make their project work. "This was done in C#...and Visual Studio 2003 and Windows Mobile 2003...and we were actually not familiar with any of these," Pesti said.

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The team also had to figure out how to integrate GPS technology as well as images from Microsoft's Terra Server, which provides satellite imagery of much of the globe.
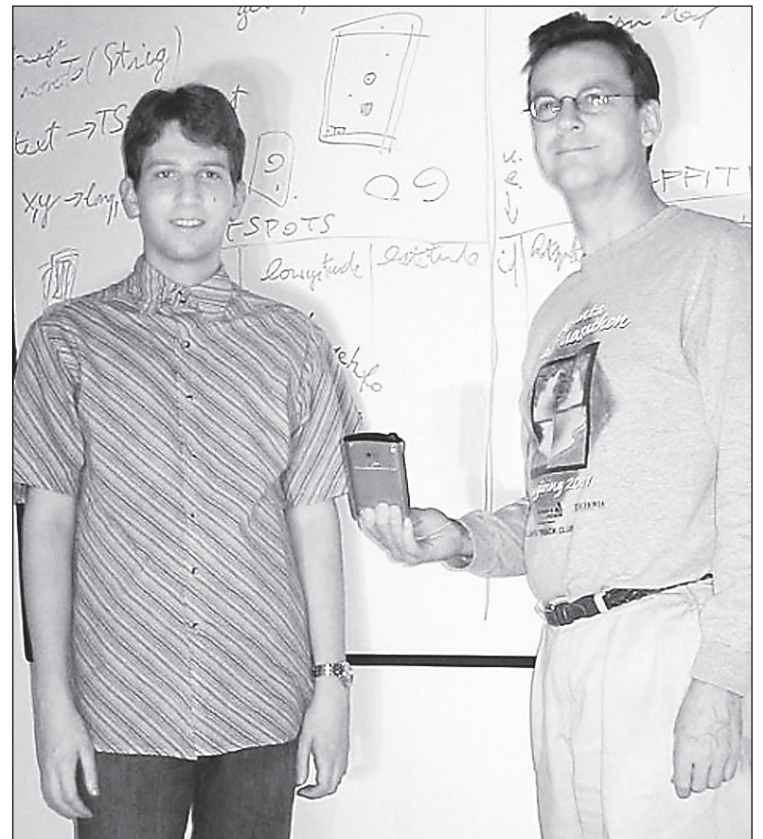

Photo Courtesy Peter Pesti and John Gibby

Peter Pesti (left) and John Gibby (Right) explain their application of Microsoft technology. Pesti and Gibby won first place at the Rocky Mountain regional of the Microsoft Imagine Cup.

The entire project took three months, with the team working right up to the start of the competition. Although they were proud of their final project, Gibby and Pesti wish that they had had time to implement additional features.

"There are functionality enhancements that we could add, like searching through the database for key words, categorizing the hot spots in terms of restaurants or places to go hiking or whatever," Gibby said. "People could do a search or locate different kinds of graffiti through a hierarchy of hotspot types."

However, Pesti pointed out, they had a smaller team and a late start. Whereas most teams in the competition comprised three to four people working six to eight months in advance, the Tech team had only two people, who started in February.

"Our project was the one which provided the most results with the least effort," he said. "Also...we were the only team in the finals which gave the judges a real live demo system that they could mess around with, that they could try to break."

And for their accomplishments, they took first place in the Rocky Mountain regional (the team was grouped into another region to even out the distribution of teams in each region) and won a $1000 prize as well as qualifying for the national

New degree option promotes undergraduate research

By Saumya Dave
Contributing Writer

As part of the Quality Improvement Plan (QEP), the Undergraduate Research Committee approved a proposal on March 10 to enable undergrad students to earn a special degree with a research emphasis, similar to a co-op degree.

The Research Plan contained two parts, the Undergraduate Research Opportunities Program (UROP) and the Research Option, both currently awaiting approval from the Southern Association of Colleges and Schools. UROP was developed to expand the opportunities for undergraduate research at Georgia Tech. The Undergraduate Research Advisory Group (URAG) is in charge of overseeing all the processes of the UROP and the Research Option.

Dr. Lohmann, member of the URAG, said that the UROP still requires a qualified individual to

occupy the position of the Undergraduate Research Director for the summer. The UROP is in charge of informing incoming students about

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> **Dr. Bruckman**
> Chair, UROP

Georgia Tech's research opportunities during orientation.

Professor Bruckman is the chair of the UROP and was able

to provide detailed information on the committee's aims. "The UROP is attempting to include a Spring Research Symposium, an outlet in which students can showcase their research, within the agendas of different academic units. Currently, only the College of Computing holds this type of an event in the spring."

As a division of the UROP, the Research Option was created as a medium for in-depth research for undergraduates. Although the approval for the Quality Enhancement Plan will not come until December, students can prepare for it by starting with their intended research and signing up the Research Option when their specific school approves of it. A general outline has been constructed and approved; it is up to each academic unit whether to participate in the plan and make individual requirements for it. The College of Computing is the only

academic unit that has currently approved the general outline.

The outline is composed of requirements that the students have

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> **Dr. McMath**
> Vice Provost, QEP

to fulfill in order to incorporate the Research Option into their undergraduate career. First, the student must complete nine hours

of supervised research, preferably over a period of at least two terms.

A two-hour class, "Writing an Undergraduate Thesis", is mandatory. During the course, the student must develop a thesis that accurately portrays the results of the research.

The thesis must be approved and graded by two faculty members and will be published in the Georgia Tech Library. Students may also have to present their thesis at a UROP symposium.

According to Dr. Leigh Bottomley, current administrator of the President's Undergraduate Award, the Research Option was already approved by the Senate and Undergraduate Committee and is now contingent upon the approval by individual majors at Tech. "It is also up to the specific majors to approve the Research Option and incorporate their own subjects of

Cup

finals round that afternoon.

Furthermore, with graduation looming, the two have considered marketing their product to Microsoft.

"There are a couple of things to try. One is to try to sort of promote it with the Terra Server guys," Pesti said. With Microsoft and Google in heated competition over internet searching and satellite mapping, Pesti said that they might be able to offer Microsoft an edge. "[Microsoft] has Terra Server, but the web interface is pretty cumbersome, so that might be a point of entry for us to say, 'Okay, we have something similar to what Google has. Do you want to take it? Do you want to improve it?'"

Pesti also said that the judges recommended that the two talk with the MapPoint web service administrators. MapPoint is a programmable Microsoft web service that allows businesses to integrate location-based services into software applications.

For more information about the Imagine Cup and the Software Design Invitational go to **imagine.thespoke. net** *or* **www.microsoft.com/press- pass/events/imaginecup.**

Research

research."

The Research Option transcends the current opportunities for students who are pursuing undergraduate research.

Dr. McMath, Vice Provost of the Quality Enhancement Plan, said that the "very few students are provided with the in-depth opportunity to work with a professor and have it appear on their transcript."

Having an accomplishment directly on a students' transcript is beneficial for students who are going straight into the workforce or who are seeking to attend graduate school.

Several students had encouraging responses when asked to consider the Research Option.

Shivani Patel, a second-year Biology major, says that she would pursue the program. "It sounds pretty interesting because it would help someone stand out in applying to medical or dental school."

On the flip side, Brian Lockwood, a fourth-year Mechanical Engineering major who currently helps with research for his department, had some reservations. He said, "[A research option] seems cool, but I don't think a thesis from undergrad work would be that valuable, just not in-depth.... The really good stuff involves really high level...special classes." He went on to say that the idea for a research option was "still cool. It will cement our research reputation."
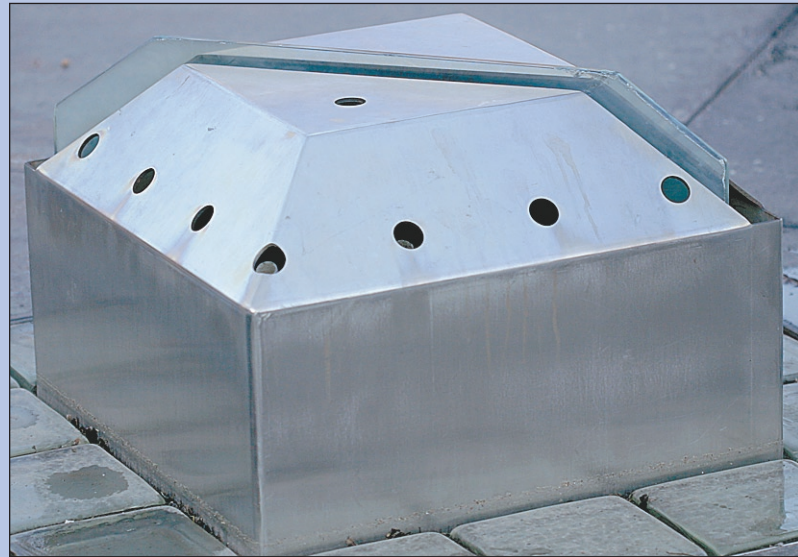
Hopefully, Tech's Research Option will encourage emphasis in undergraduate research as an important hands-on learning tool.

It is expected that each academic department will approve the plan and implement its own requirements by next December.