Handheld technology that helps grocery shoppers find the olives

Mobile computing enters the retail arena

Jane Sanders
Research News and Publications

S

ome day soon grocery shoppers using wireless personal digital assistants (PDA) may be able to interact with a store's computer system to locate items and learn about special promotions.

In a field test of a prototype PDA system developed by Georgia Tech researchers, shoppers reported that the device made shopping easier and more efficient. Shoppers tended to avoid impulse buys and also found items in the store more quickly. On the downside, shoppers did not like holding the PDA while shopping, and many suggested a docking station on the shopping cart — an idea explored, but not tested in this study.

“It's still an unanswered question as to whether the PDA is the right device for use in grocery stores,” said Associate Professor of Computing John Stasko, who supervised the project. “Our study clearly showed some potential. But the devil is in the details.”

Stasko’s former students Erica Newcomb and Toni Pashley, who graduated with master’s degrees last year, presented the details in a paper presentation titled “Mobile Computing in the Retail Arena” earlier this month at the Computer-Human Interaction (CHI) 2003 meeting in Fort Lauderdale, Fla. The study involved extensive background research — including observation of and interviews with shoppers and a shopping survey — before designing and testing a prototype.

From their research, Pashley and Newcomb fashioned a system that could be implemented now and offers many of the features shoppers want. Using an idealized scenario, the researchers were able to build a prototype software system that put the grocery list in the center of the PDA screen and devoted the top of the screen to a store layout. The revolving promotional area was placed at the bottom of the screen.

Five users tested the prototype in a Kroger store in Atlanta. Researchers Pashley and Newcomb gave them a series of tasks — for example, find milk, eggs and bread — requiring use of various system features, and then observed and audiotaped the users as they shopped with the PDA.

“It was generally well received,” Stasko said. Participants appreciated the system’s ability to identify the location of items in the store, which was probably the most-used feature of the interface, Pashley and Newcomb reported.

Participants commented on how quickly they shopped, how focused they were on the shopping list and how they did not feel like they browsed while shopping. One participant said he is usually “all over the store.” The PDA interface helped him move orderly through the store, and that, with the list on the application, they shopped more quickly.

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research and the SGA presidency.

“I believe in getting involved in the leadership of your community, wherever you are,” said Watson.

While at Tech, the 21-year-old junior has done his best to get as much experience as he can in public life. In addition to his work on the SGA, Watson has interned for U.S. Rep John Linder (R-Ga.), Georgia State Senator Steve Thompson and the Georgia General Assembly. That’s time well spent, given his career choice: U.S. congressman and environmental policy maker.

“I feel a lot of the time that politics has a dirty name,” said Watson. “I want to do my best to restore people’s faith in politics. If we can focus on the issues, I believe we can do that.”

One of his major goals for the SGA is getting the Board of Regents to approve an academic bill of rights in May. The bill, which has been several years in the making, would guarantee rights to students such as: the right to get a syllabus, the right to see...
Annual banquet celebrates Tech’s women in engineering

Larry Bouie
Institute Communications and Public Affairs

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“There were a total of 220 women students out of about 10,000 men,” the civil engineering graduate said. “There was one women’s dorm, two sororities and still a strong feeling among some faculty that women weren’t cut out to be engineers.”

But Jabeley knew better then, and today she has the experience and wisdom of a successful 30-year career in the oil and gas industry to prove it. Earlier this month, speaking before hundreds of Tech engineering students, Jabeley returned to her alma mater to congratulate the latest generation of female engineers.

“I am impressed by the caliber of these new students; not just their grades and SAT scores, but their activities, their sense of community and their fervor to make the world a better place,” she said.

Jabeley, manager of field operations studies for Schlumberger, was the keynote speaker for the annual Women in Engineering Awards Banquet, an event that salutes the success and achievements of Tech’s female engineers. More than 400 of Tech’s top female engineering students turned out for the April 10 event, now in its fifth year, giving students an opportunity to take a break from campus rigors and be recognized for their hard work and the impact they’ll soon make in the engineering profession.

“Each of you has managed to keep a cumulative grade point average of 3.4 or above, while demonstrating outstanding leadership qualities on and off campus,” said Professor Mimi Philobos, the director of the Women in Engineering Program who initiated the event in 1999 and has organized it every year. “We are all inspired by your example and by the great many women, as well as men, dedicated to enriching our campus through this program.”

A total of 17 companies that support the program throughout the year, including banquet sponsor Kimberly-Clark, awarded $31,000 in scholarship money during the event. Alumni contributed a total of $12,000 to fund the 12 Shirley Mewborn Scholarships in celebration of the 50th anniversary this year of Tech admitting its first female students. The Schools of Mechanical Engineering and Electrical and Computer Engineering contributed an additional $2,000, bringing in a total of $45,000 worth of scholarships that were awarded to 59 students.

During the banquet, two Excellence in Teaching awards (voted on by students in engineering) were presented to faculty who made a difference in the students’ lives. The recipients, who each received $1,500 and a crystal trophy, were Amy Pritchett, an associate professor in the School of Industrial and Systems Engineering, and Larry Jacobs, a professor in the School of Civil and Environmental Engineering.

Editor’s note: In the April 14 issue, a roll call of award winners and STRAP graduates presented during the Faculty/Staff Honors Luncheon failed to mention Barbara Walker (School of Modern Languages) as a STRAP graduate, and Assistant Professors Nora Cottile-Foley (Modern Languages) and David W. Scott (Georgia Tech Regional Engineering Program), who received the CETL/BP Junior Faculty Teaching Excellence Award.

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professors during office hours, and the right to have class only during scheduled times. Watson is one of 76 scholars selected from 635 national candidates nominated for the award. Each scholarship provides $30,000 — $3,000 for the senior year and $27,000 for two or three years of graduate study. The Harry S. Truman Scholarship Foundation was established by Congress in 1975 as a federal memorial to the 33rd President of the United States.

The Truman Scholarship isn’t the first honor Watson has won at Tech. As an incoming freshman, he won the President’s Scholarship, the Institute’s most prestigious scholarship, which is given to freshmen who demonstrate leadership in their community and academic excellence.

**Goldwater Scholar wants to reform health care system**

Georgia Tech junior Monique Gupta doesn’t want much out of life: just to get a Ph.D., an M.D. and improve the efficiency of gene transfer techniques and the health care system. On track to receive her bachelor’s in industrial and systems engineering (ISyE) from Tech next year, she has a bit of work to do before she reaches those goals. Winning the prestigious Goldwater scholarship has put her one step closer. “She’s really the best I’ve seen in several years,” said Paul Griffin, undergraduate coordinator for ISyE.

“ISyE gives me an engineering background, which helps with research analysis and technical writing,” Gupta said. Healthcare system efficiency is also one of the major areas of concentration in ISyE, said Griffin.

Gupta has been working on gene therapy techniques with Joseph Licibrea, professor of biomedical engineering.

Gene therapy is a novel approach to treating diseases, and most of it is still in the experimental phase, said Gupta. The idea is that scientists would first identify a gene in a patient that is causing a certain disease. “A new gene would be created in a lab, and doctors would use it to replace the gene that is causing the problem,” explained Gupta, who is also a President’s Scholar.

“Diseases that can be helped by gene transfer include rheumatic arthritis and juvenile arthritis,” she said. By paying up to $7,500 toward next year’s tuition, fees and room and board, the scholarship should help her save money for graduate and medical school. This year the Barry M. Goldwater Scholarship and Excellence in Education Foundation awarded 300 scholarships out of a field of 1,193 applicants from the United States and Puerto Rico.

On wings made of paper

The strength of both the wind and the competition conspired to give Georgia Tech students an eighth-place finish at the finals of the Energy Challenge, in which each room builds and flies a glider model entirely of paper products. High winds, however, meant professionals did most of the flying.

Undaunted, the students are already gearing up for next year’s challenge: creating a paper snowboard for competition in Colorado.

Discovering a career in architecture

Explore the possibilities at Georgia Tech’s Career Discovery Program in Architecture, a three-week program beginning June 9.

Participants will spend three weeks at the College of Architecture, learning about principles of design and the practice of architecture. Faculty members and professional architects will introduce participants to the history and practice of architecture and guide their interest with personal career counseling. The program is open to high school juniors and seniors as well as college students.

Participants will also spend time in the design studio where they will practice drawing techniques, learn the principles of design and build models. Off-site activities include field trips to architectural firms, construction sites and museums.

Tuition includes all academic and studio sessions, films and a parking permit. A list of supplies will be provided upon admission to the program. The deadline for submitting the application packet is May 1.

Additional information about the program, as well as an application, is available at www.coa.gatech.edu/content/courses/CD2003.html or by calling 894-9880.

Register for parking permits

Beginning last week, the Office of Parking and Transportation was accepting parking permit registration on its Web site through June 30. To log on to the automated system, visit www.applyparking.gatech.edu.

The system requires the user to input their new gtid# — rather than a social security number — and may be found at www.gtid.gatech.edu.