THE WHISTLE

Handheld technology that helps grocery shoppers find the olives

Mobile computing enters the retail arena

Jane Sanders
Research News and Publications

Some 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,

A rendering of the PDA's user interface, showing a map of the store, the shopper's list, and a list of sale items

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Mind if I play through?

photo by Nicole Cappello

Jim Dreger, left, checks Buzz's form during the annual Jim Dreger Golf Classic, coordinated by the Alumni Board for Tech's Building Construction program to raise funds for student scholarships, recruiting, computer and software upgrades, career fairs and curriculum development. Tournament players include general contractors, subcontractors and other construction and development industry leaders.

Students earn top national scholarships

David Terraso
Institute Communications
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To Nate Watson, politics isn't a dirty word — it's a calling. A double major in public policy and earth and atmospheric sciences, Watson is preparing himself for a life in public service. So far, he's off to a good start. He's spent the past two years as the executive vice president of Tech's Student Government Association (SGA). Now he's won both the prestigious Harry S. Truman scholarship 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

Nate Watson

photo by Nicole Cappello

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 Bowie
Institute Communications
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When Georgia Tech alumna Sally Jabeley reminisces about her days at Tech in the early '70s, she's struck by how many things have changed since then.

"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 39 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 Aerospace Engineering, and Larry Jacobs, a professor in the School of Civil and Environmental Engineering.

For more information...

Women in Engineering:
www.coe.gatech.edu/wie

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he did not "even want to look around."

The researchers noted, "While this might not be good news for the grocery stores, quick and efficient shopping was stated as one of the most desired grocery shopping traits in the survey we conducted."

Researchers believe their prototype might be tweaked for use in other retail domains, including discount department and home improvement stores. Because shoppers are usually less familiar with these types of stores, the task of finding items would become paramount for the PDA application, Stasko added.

Several other shopping aids have been researched elsewhere. They include Easi-Order, a PDA application for creating a shopping list at home and then sending it to the store. It was launched in Safeway stores in the United Kingdom. Klever-Kart is an on-cart device that offers users information on sales, nutrition, news and weather. And Shoppers Eye is a research concept that has mall

Georgia Tech researchers Erica Newcomb (left), John Stasko (center) and Toni Pashley created a prototype PDA system that makes grocery shopping easier and more efficient, according to shoppers who have tested it. Shoppers tended to avoid impulse buys and also found items in the store more quickly.

shoppers carrying a wireless PDA to share their list with stores that make bids for the user's business.

For more information...

Associate Professor John Stasko
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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

photo by Nicole Cappello

Monique Gupta

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.

Gupta came to Tech from Macon three years ago. At the time, she said, she didn't really know what she wanted to do, only that she wanted to study engineering. After being at Tech for a while, it all came together when she decided to major in 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 LeDoux, 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 1,093 applicants from the United States and Puerto Rico.

IN BRIEF:

Library modifies electronic access
The Library is modifying access to its electronic journals, databases and other resources due to security problems that information providers are experiencing worldwide. Beginning May 5, users of the Library's electronic resources will no longer be able to create or utilize direct links to electronic journals and databases. Students, faculty and staff will instead gain access through the Library Web site at **www.library.gatech.edu**. From the Web site, one can select either the databases link or the e-journals link and pick the resources needed. The user will be prompted for a PRISM ID and password. An advantage to this new process is it will make off-campus access more stable.

For questions regarding this change or additional information, contact your College or School's information consultant (**https://www.library.gatech.edu/infoconsultants_frame.htm**), the Information Services Desk (894-4530) or Tim Daniels at tim.daniels@library.gatech.edu (894-0816).

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/conted/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**.

On wings made of paper

The strength of both the wind and the competition conspired to give Georgia Tech's students an eighth-place finish at the finals of the Energy Challenge, in which each team builds and flies a glider made 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.

Up With the White & Gold: Students host ceremony honoring faculty and staff

Dean Griffin Day Faculty and Staff Superlatives (Presented by the Georgia Tech Ambassadors)

GO THE EXTRA MILE AWARD
Rena Brakebill, Mathematics

MOST GEORGIA TECH SPIRIT
Carol Heller, Special Programs

MOST INTELLECTUAL
Stephen Ziliak, Economics

MOST INTERACTIVE
David Ringholz, Architecture

MOST LIKELY TO BE THE TWENTY-FIRST CENTURY ISSAC NEWTON
Michael Amitay, GTRI

MOST LIKELY TO WIN A NOBEL PRIZE
Thomas Morley, Mathematics

MOST OUTSTANDING STAFF AWARD
Danielle McDonald, Student Affairs

OMICRON DELTA KAPPA FRIEND OF THE STUDENT AWARD
Bill Caldwell, Architecture

Burdell's Best (Presented by the President's Council)

OUTSTANDING FACULTY/STAFF ADVISOR
Kim Lovelace, Student Center
Ajeet Rohatgi, Electrical and Computer Engineering