Inside:

EVE Award . . . . . .Page 2
Software upgrades . . . .Page 2
Bucky retires . . . . . .Page 3
Campus Events . . . . . .Page 4

THE WHISTLE

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Swan Song

photo by Stanley Leary

Retiring Music Director Bucky Johnson and his wife are chauffeured from Grant Field in the Ramblin' Wreck, following a halftime presentation during the Georgia-Georgia Tech football game honoring his years of service to the Institute. Shaking his head in disbelief, he likened the tribute to "an out-of-body experience." After 19 years, Johnson also said he "always wanted to retire while I was still enjoying my work." See article, page 3

Repeat performance: 2002 Olympic torch built at Tech

Professor who engineered '96 torch tapped by Salt Lake City

Larry Bowie
Institute Communications and Public Affairs

For many people, the Olympic torch is a dazzling vessel that represents the spirit of the Games. But for the engineer who designs it, the torch is a labor of love that embodies months, if not years, of unique engineering challenges.

The 2002 Salt Lake City Olympic Games, which begin in February, mark the second time that mechanical engineering professor Sam Shelton has stepped up to the challenge of building an Olympic torch. In addition to the Winter torch for Salt Lake City, he built the 1996 Summer Olympic torch for Atlanta.

"I have had many diverse experiences in my life as an engineer and as a human being, and this is certainly one that has brought many of those elements together," Shelton said. "I feel sometimes more akin to an artist than an engineer."

Beginning Dec. 4 in Atlanta's Centennial Olympic Park, more than 11,500 people will carry the Olympic torch on a 13,500-mile journey through the United States to Salt Lake City, where it will light the Olympic cauldron on Feb. 8 and open the 2002 Winter Olympic Games.

As it covers that expansive territory, the durability of the torch will be put to the test. It must be engineered so that the Olympic flame cannot be easily extinguished under widely varying weather conditions.

In particular, Shelton noted the unique engineering challenge of the glass crown. The torch was not designed to have the flame burn from the top of the torch; rather, the flame emerges from within the torch through a glass crown, echoing the theme of the Games: "Light the Fire Within."

The design called for a glass crown with an asymmetrical shape and icy texture, which would not easily break if dropped during the relay, but also could stand up to both the heat of the flame and below-freezing temperatures at the same time.

Shelton's next challenge was to produce a valve-and-burner system for the torch's interior that would prevent the flame from being extinguished under extreme conditions — temperatures between -40 and 80 degrees Fahrenheit, gusting winds, heavy rain and high altitudes. The flame also had to remain highly visible in all weather conditions.

photo by Sue Clites

At right, Andy Blackshaw tests burner applications as Sam Shelton looks on. The flame must be highly stable and able to withstand extreme weather conditions, including varying temperatures, gusting winds or heavy rain.

"Those are difficult conditions to maintain a lit flame," Shelton said. "Of course it is of utmost importance to keep this sacred flame lit."

The body of the torch is tapered with an antique silver finish and dark-shaded grooves that run from top to bottom. The Salt Lake City logo, Olympic rings and the text, "Light the

Torch continued, page 2

By the numbers: the 2002 Olympic torch

Weight: 3 lbs.
Length of a torchbearer's run: 20 minutes
States visited during the relay: 46
Number of torches produced: 12,000

Tech student awarded Marshall Scholarship

Bruce Brooks
College of Computing

James Andrew Ozment, a Georgia Tech graduate with a degree in computer science and current research scientist for the College of Computing, is one of 40 national winners of the 2002 Marshall Scholarship award. Ozment plans to pursue a graduate degree in Information Systems at the London School of Economics next fall en route to his Ph.D. in information security policy.

A native of Huntsville, Ala., Ozment becomes only the second Georgia Tech student in 20 years to win the prestigious Marshall Scholarship, established in 1953 for U.S. students by the British in appreciation for assistance received after World War II under the European Recovery Program, also known as the Marshall Plan. Financed by the British Government, the scholarships provide an opportunity for American students who have demonstrated academic excellence and leadership potential to continue their studies for two or three years at a British university.

Long regarded as one of the highest undergraduate accolades, the Marshall Scholarship covers the scholar's tuition costs, books, travel and living expenses while in the United Kingdom. While intended for young Americans who will one day be leaders, opinion formers and decision makers, the scholarship encourages students to become ambassadors and establish personal ties between the United States and Britain.

As an undergraduate, Ozment was well-rounded academically and active in the Tech community. In addition to his undergraduate degree in computer science, Ozment obtained certificates in history, music and business Spanish, and served as a teaching

Ozment continued, page 3

"QUOTE— UNQUOTE"

"Think of the major organizations we have here in (metro) Atlanta — CNN, UPS, the Federal Reserve Bank, the CDC (U.S. Centers for Disease Control and Prevention). All of them are extremely dependent on information systems. So are little companies. Most of these systems were never designed with security as a major factor. Just like airports were never designed for that. They were designed for efficiency and safety. Security often runs contrary to that. Ease of access is very much in conflict with security."
—Sy Goodman, professor of international affairs and computing, on the vulnerability of the Internet to cybercrime and cyberterrorism.
(Atlanta Journal-Constitution)

"There are a large number of options for bone (growth) for very challenging problems. Bone has the ability to regenerate better than other tissue."
—Robert Guldberg, an assistant professor in the School of Mechanical Engineering, on his work in the Center for the Engineering of Living Tissue, developing a technology that could stimulate bone growth for accident victims.
(Atlanta Business Chronicle)

Georgia Tech

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Torch, continued from page 1

fire within," are etched into the front.

The outer shell is made from aluminum and plating to produce a polished chrome finish. For the first time in the history of the Olympics, the torch is topped with a glass crown from which the Olympic flame emerges from a copper cauldron. The flame is visible from within the crown.

As is tradition, the same flame that is lit in Athens, Greece, must be the same flame that lights each Olympic cauldron. The 2002 Winter Olympic flame is lit in Athens during a traditional ceremony in which a parabolic mirror is used to light the torch from rays of the sun. The torch then travels by plane to Atlanta, the last place the torch burned in America during the 1996 Olympic Games. In the event the flame is extinguished along the relay, several safety lanterns are lit during the ceremony in Greece.

Shelton had considered the chance to build the 1996 Games torch a once-in-a-lifetime opportunity

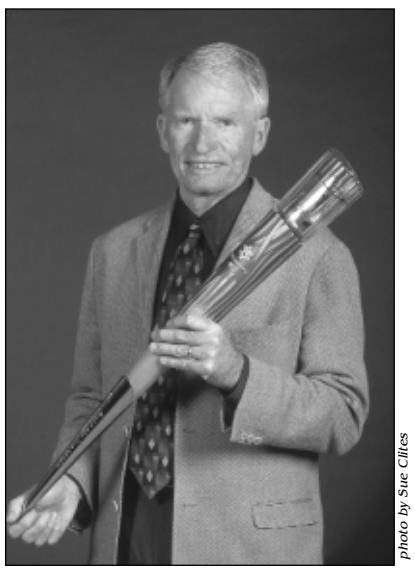

photo by Sue Clites

Sam Shelton and the 2002 Winter Olympic torch.

— until officials from Salt Lake City called him in early 2000. Hesitant to commit to the toils and pressure of building an Olympic torch, Shelton wasn't sure he was up for a repeat performance.

"I had to give it a lot of consideration," he said. "I did not immediately say yes." In 1996, Shelton said he had nearly two years to complete the job. This time around, he had only about eight months. "I never would have agreed to do it if I hadn't been down this path before," he said.

Shelton said the arduous process of building the 1996 Torch culminated in thrilling emotions when he participated as a torchbearer in the Summer Olympics relay and carried the torch down Peachtree Street in Atlanta. He describes the emotion he and others felt as "the magic of the flame."

"I saw the tears that came down people's cheeks when they carried the torch, as well as the people standing on the street side who were watching them go by," he said. "For some mystical reason, the emotion that typically comes is one that causes tears to come down your cheek."

For more information...

For downloadable photography, video clips and background on engineering the 2002 Olympic torch, visit
www.torch.gatech.edu/

Celebrating diversity

photo by Sue Clites

The Campus Diversity Council and the President's Office recently hosted a reception to celebrate the Institute's acceptance of the U.S. Department of Labor 2001 Exemplary Voluntary Efforts (EVE) Award. The EVE Award recognizes innovative efforts to increase employment opportunities for minorities, women, disabled citizens and veterans. The award honors campus programs that support diversity — staff training; mentoring; student initiatives such as OMED, FOCUS and the Women's Resource Center; community involvement through CEISMC, Team Buzz and Institute Partnerships; and departmental initiatives. Officials from the district office of the U.S. Department of Labor congratulated attendees for their contributions toward this achievement. At left, members of the Office of Diversity Management — Thomas Vance, compliance officer; Pearl Alexander, director; Nicole Shinhoster Stephens, diversity management specialist; and Tony Howard, now AAP/EEO specialist with Griffin Services — hold the award with President Wayne Clough and John Gibson, retired former director of Personnel Services.

Campus computers to get free software upgrades

Theresa Harvard Johnson
Office of Information Technology

The Office of Information Technology announced last week that Tech has entered into the Microsoft Campus Agreement with the University System of Georgia Board of Regents. This agreement ensures that specific Microsoft products will be made available to faculty and staff — but not students — at no cost to the units.

Since software licensing is such an important responsibility for Tech, this initiative will greatly aid units across campus in managing their software licenses for Microsoft products.

The decision to enter into this agreement was made to leverage the cost of acquiring the software on behalf of the individual units within Georgia Tech and to improve compliance across the campus units.

As allowed by individual unit policies, in concert with Institute policies, and at the discretion of the unit head, personnel authorized to load software (e.g., CSS and CSRs) may install these products on Tech-owned equipment. Also included with this agreement is a home-use program. When individual unit policies allow working from off-campus sites, this contract allows all of the above products — excluding the operating systems — to be installed on one home-use computer when used for business purposes only.

CSS, CSRs and personnel authorized to load software on Georgia Tech machines can subscribe from OIT online. The software will be primarily distributed via file transfer protocol, but can be obtained on CD by special request. This software will require an annual re-subscription to individual machines each fiscal year, which runs from July 1 to June 30.

This does not relieve units from the responsibility to manage all of their software licenses, and care must be given to ensure compliance with all other software licenses.

Microsoft Campus Agreement

OIT's agreement includes a site license for the following Microsoft products:

- Windows Desktop Operating Systems Upgrades
- Office: (current and previous releases)
  - Standard (Word, Excel, Outlook, PowerPoint)
  - Professional (Word, Excel, Outlook, PowerPoint, Access)
  - Macintosh edition (Word, Excel, Entourage, PowerPoint)
- FrontPage 2002
- Visual Studio Professional 6.0
- BackOffice Server Client Access License
- Microsoft Press

Additional package details are available at: software.oit.gatech.edu/microsoft/

For more information...

OIT's Windows support statement:
www.oit.gatech.edu/cs/winsup.html

OIT Customer Support Center:
894-7173
support@oit.gatech.edu
www.oit.gatech.edu/cs

Music Director Bucky Johnson takes final bow

Jack Williams
Georgia Tech
Athletic Association

Bucky Johnson, right, plans for a performance of the 1996 Olympic Band.

In 19 years as director of bands at Georgia Tech, Bucky Johnson has become as much a part of the spirit and pageantry of Yellow Jacket athletics as Buzz. That's not to say the guy ever pulled off anything as daring as a somersault at mid-field or push-ups in the end zone. But he sure did stand tall in a special kind of way.

Johnson directed the Yellow Jacket Marching Band for the last time during the Nov. 24 football game against the University of Georgia. He will step down in January and take early retirement at the age of 50 from his Tech duties. As one Yellow Jacket band member put it, "We'll be playing sad songs for a while."

Located in the College of Architecture, the music program currently serves more than 900 students each semester. Under Johnson's direction, the marching band alone has tripled in size — almost 300 members strong.

Thomas Galloway, dean of the College of Architecture, says the Music Department has grown substantially under Johnson's leadership. "It is remarkable that at an institution that does not offer a music major, Tech students enjoy an enormously broad range of high quality music experiences," he said. "Great credit for this goes to Bucky and his wonderful faculty colleagues."

Among his peers, his legacy is evident. "Bucky's contagious laughter and fantastic personality has influenced many individuals at Georgia Tech," said Andrea Strauss, associate director of bands. "He inspired thousands of students to play their instruments in the band and to have fun."

"The Georgia Tech bands have been my life up to this point," Johnson said, "but I do look forward to the opportunity of doing some other things. I told a friend, 'I was lucky that I happened to be at the right place at the right time to get this job.'"

Johnson obviously has taught that lesson to the thousands of Georgia Tech students who have taken his band classes. The students have taught him some lessons, too, especially those related to Ramblin' Wreck tradition.

It has become "the thing" for band members to gain access to Johnson's locked office and pull off some sort of prank. "One year, they moved out all the furniture and the room was empty when I walked in," he said. "Another year, they hung newspapers and balloons from the walls. The most memorable prank, however, came the year the students placed a commode beside my desk. They even brought along a photographer to take a picture of me sitting on it."

Most of the traditional lessons, however, take a different form. More so than any other campus group, men and women in the band observe the old Rat Hat tradition. "They have a 'Tradition Night' for new band members," Johnson says, "and teach the freshmen such tricks as writing football scores on the Rat Hats up-side down when Tech loses and upright when Tech wins."

The band members perpetuate other traditions as well. "The band members see that the George P. Burdell name is announced on PA systems at games and in airports," Johnson said. "They've even had the name placed on theatre marquees."

Johnson also served from 1992 through 1996 as director of the Olympic Band. Many Tech students also were involved as members of that group. The band played at the opening and closing ceremonies for the 1996 Olympic Games and also performed at Atlanta Symphony Hall and at City Hall.

"Our band philosophy is simple," Johnson said. "We feel that what we do in the stands before the game and during the game is just as important as the halftime show. The halftime performance actually is just one-third of what we bring to the table. You have the best of both worlds when your music is both entertaining to the fans and interesting for the students who are performing."

Johnson says he is taking early retirement for three reasons. "For one thing, the Georgia Tech retirement plan is so good," he said. "I also want to spend more time with my family after working so many nights and weekends. And I always wanted to retire while I was still enjoying my work."

He still plans to be involved in music and will conduct an annual Music Festival at Six Flags for middle school and high school students. But that's for another day.

Ozment, cont'd from page 1

assistant. Ozment was a President's Scholar, a member of the Honor Advisory Council and a Georgia Tech Ambassador. Additionally, he was a co-op student at Nortel Networks and participated in research as an undergraduate. His research project on cheating resulted in a presentation at the 2000 conference of the American Society of Engineering Education and was published in the proceedings.

Currently Ozment is a full-time research scientist for the College of Computing, working for both the Computing and Networking Services (CNS) group and the Georgia Tech Information Security Center (GTISC). On a part-time basis, he is pursuing a master's degree in Information Security with an emphasis on technical policy at Tech.

"We are extremely happy for Andy in winning this prestigious Marshall award and are proud of his accomplishments as a student in the College," said Peter Freeman, dean of the College of Computing. "Andy is indicative of the caliber of student we seek to attract in the College, and this award serves as an encouragement to faculty as well as our students for the work we are doing in our program."

For more information...

To recommend a candidate for next year, contact Georgia Tech's Marshall Scholarship advisor, Amanda Gable, at amanda.gable@grad.gatech.edu.

IN BRIEF:

Awards season begins

Realizing the need for and importance of cultivating an environment where value is placed upon the broader concerns of all humanity, the Diversity Council is now **accepting nominations** for the **Don Bratcher Human Relations Awards**. The awards honor members of the campus community who are engaging in exemplary human relations work.

The award will grant one faculty/staff member $3,000 and one undergraduate/graduate student $1,500. To nominate a faculty or staff member, or a student, visit www.eodp.gatech.edu to download award guidelines and a nomination form. All nominations must be submitted by Dec. 17. Call 894-7042 with additional questions.

The Administrative Service Award Committee is **soliciting nominations** for the 2001-2002 award. Each year, the **Administrative Service Award** is given to honor an individual for making extraordinary contributions to Georgia Tech in an administrative capacity. This award complements the annual teaching and research awards presented to outstanding faculty members and will be presented at the Faculty and Staff Honors Luncheon on Wednesday, April 10, 2002. Nomination packages must be submitted no later than February 1. More information is available at www.cc.gatech.edu/~dbl/asac.

Additionally, the **Outstanding Staff Performance Awards** were initiated to recognize classified staff members who render outstanding performance in support of instructional, research, or administrative activity and are presented each year at the Faculty and Staff Honors Luncheon. Nominations must be submitted to the provost's office no later than January 25. Questions regarding these awards can be directed to Gerri Naramore at 894-8887 or by e-mail at gerri.naramore@carnegie.gatech.edu.

Toy drive

The Office of Student Financial Planning and Services, located on the third floor of the Bill Moore Student Success Center, is a collection site for the **Toys for Tots** program. Toys should be unwrapped and new. Keep in mind that books, new or used, are exceptionally good gifts for this program. The toy drive will conclude on Thursday, December 20. Call David Fasano at 894-1962 about the campaign.

Support for ECE

EMS Technologies announced recently that it has provided a **fellowship award** to the School of Electrical and Computer Engineering to help cover expenses for graduate students pursuing advanced degrees in the Microwave Engineering program.

Over the past 18 years, EMS has provided approximately $250,000 to help support doctoral and master's candidates in the School of Electrical and Computer Engineering. EMS currently employs more than 50 Tech alumni, the majority of whom work in technical engineering roles.

"The School of Electrical and Computer Engineering at Georgia Tech is fortunate to be ranked as one of the best programs in the United States," said ECE Professor Andrew Peterson. "Without the support of industrial partners such as EMS Technologies, we would lose many of our most capable students to programs in other parts of the country."