Budgeting our future
Institute leadership planning for fiscal uncertainty

With the state legislature in session and the governor’s budget request being examined by elected representatives, Georgia Tech’s leadership is paying close attention to how debates are advancing and the potential impact these decisions will have on the higher education system.

When the governor addressed the general assembly on Jan. 14, he submitted both an amended FY2009 budget to reflect a projected $2.2 billion shortfall and a proposed budget for the upcoming fiscal year.

With 8 percent of Tech’s operating budget cut and the need for further cuts unknown, Institute leadership is taking a precautionary measure in recommending that units “hold in reserve” an additional 1 percent for this fiscal year, which ends June 30.

Overall, the governor’s projections for the next fiscal year are based upon a 3 percent growth in revenue. Budget officers at Georgia Tech intend to approach the planning process by calculating for contingencies that assume revenue growth, stagnation or decline over the previous fiscal year.

Tech’s three legislative priorities—funding the Clough Undergraduate Learning Center ($43 million), in addition to the University System’s request for Major Repair and Rehabilitation funds ($70 million) and new formula funding for student instructions and campus operations ($109 million)—were all included in the governor’s FY2010 budget.

The governor’s budget proposals contain many reductions across all units of state government, including some initiatives that are part of the Georgia Tech Research Institute, the Advanced Technology Development Center, the Traditional Industries Program and the Georgia Research Alliance. These cuts are not a reflection of whether these initiatives are effective, but rather the product of hard choices that must be made in balancing the state’s budget. Institute leadership is assessing the governor’s recommended changes.

In the highly competitive research environment, Interim President Gary Schuster recently reported that Tech’s faculty continues to be successful.

Currently, the Institute is on track to earn more than $500 million in new sponsored awards for the first time in its history.

He pointed out that this not only demonstrates the confidence these funding agencies have in the strength of our ideas and quality of our research, but also represents a significant return on the state’s investment in Tech.

For more information:
Office of Budget Planning and Administration
budget.pbf.gatech.edu/

Lyman Hall offices unite for annual charity drive

ROBERT NESMITH
COMMUNICATIONS & MARKETING

One community of campus offices shares more than a building each year.
Members of the offices located primarily in Lyman Hall—such as Budget Planning and Administration, Internal Auditing, Business, Services, and Capital Planning and Space Management—have pulled together and adopted an area shelter and Georgia Tech families in need. These Administration and Finance offices have carried out these projects for the past several years. “[This December] was our eighth party and service project,” said Budget Planning and Administration Director Jim Kirk. “The first year we did this, we adopted the Atlanta Day Shelter for Women and Children, a neighbor of Georgia Tech, which provides services to the homeless and to a lot of people who walk in [needing assistance].” According to Kirk, shelter clients need food, personal supplies and Christmas gifts for children.

While the Lyman Hall community collects items for the Atlanta Day Shelter throughout the year, in December they collected more than $500 in cash along with a full vanload of items and several hundred pounds of food for shelter clients.
In addition to helping an established shelter, Kirk says they also aim to provide assistance a little closer to home. “Five years ago, we started adopting Georgia Tech families,” he said. Recipients

LYMAN HALL
continued on page 4

On our game
Tech’s Game Day Recycling initiative exceeds inaugural goal

ROBERT NESMITH
COMMUNICATIONS & MARKETING

The Institute’s inaugural football Game Day Recycling program surpassed its goal by collecting nearly 12 tons of aluminum cans and glass and plastic bottles from both tailgaters and those inside the stadium.
For the seven home games played from Aug. 28 through Nov. 20, volunteers distributed blue recycling bags to tailgaters prior to the game. A little more than 1 ton of recycled material was collected for each of the first four games. For the Virginia and Florida games, more than 2 1/2 and nearly 3 1/2 tons were collected, respectively. Overall, 11.83 tons were collected during the season.

GAMEDAY RECYCLING, continued on page 4
Hyper-formance

New wireless standard boasts ultra-fast media applications

HOW FERNANDEZ

COMMUNICATIONS & MARKETING

Rapid transfer of a high-definition movie from a PC to a cell phone—plus a host of other multimedia data possibilities—is approaching reality.

The Georgia Electronic Design Center (GEDC) at the Georgia Institute of Technology has produced a CMOS chip capable of transmitting 60 GHz digital RF signals. This chip design could speed up commercialization of high-speed, short-range wireless applications, thanks to the low cost and power consumption of complementary metal oxide semiconductor (CMOS) technology.

Among the many potential 60 GHz applications are virtually wireless desktop-computer setups and data centers, wireless home DVD systems, in-store kiosks that transfer movies to handheld devices in seconds and the potential to move gigabytes of photos or video from a camera to a PC almost instantly.

“We believe this new standard represents a major step forward,” said Joy Laskar, a member of the Ecma 60 GHz standards committee and director of the GEDC at Georgia Tech. “Consumers could see products capable of ultra-fast short-range data transfer within two or three years.”

The GEDC-developed chip is the first 60GHz embedded chip for multimedia multi-gigabit wireless use. The chip unites 60GHz CMOS digital radio capability and multi-gigabit signal processing in an ultra-compact package.

This new technology, Laskar said, “represents the highest level of integration for 60GHz wireless single-chip solutions. It offers the lowest energy per bit transmitted wirelessly at multi-gigabit data rates reported to date.”

Industry group Ecma International recently announced a worldwide standard for the radio frequency (RF) technology that makes 60 GHz “multi-giga-bit” data transfer possible. The specifications for this technology, which involves chips capable of sending RF signals in the 60 GHz range, are expected to be published as an ISO standard in 2009.

“Multi-gigabit technology definitely has major promise for new consumer and IT applications,” said Darko Kirovski, senior researcher at the Microsoft Research division of the Redmond, Washington, software giant. “Ecma’s move on international standardization of 60 GHz frequency range brings us closer to realizing that promise.”

GEDC researchers have already achieved very high data transfer rates that promise unprecedented short-range wireless speeds—15 Gbps at a distance of 1 meter, 10 Gbps at 2 meters and 5 Gbps at 5 meters.

Laskar recently discussed the potential of 60 GHz wireless technology at an MIT Enterprise Forum of Atlanta panel discussion on “The Future of Wireless Communications.” The panel, which included Walt Mossberg of The Wall Street Journal and AT&T Mobility CEO Ralph de La Vega, was broadcast Nov. 24, 2008 (www.mitforumatlanta.org).

“Multi-gigabit wireless technology is wideranging as a means to bring important new wireless applications to both consumer and IT markets,” said Anna Revelli-Pearce, chair of the MIT Enterprise Forum of Atlanta chapter board.

For more information: www.gedcenter.org

This 60 GHz single-chip CMOS radio-frequency device, developed at the Georgia Electronic Design Center by Joy Laskar and Stephen Lin, is currently the world’s most integrated chip for 60 GHz wireless applications.

From the News Room

Multi-spectral imaging in the palm of your hand

Jon Sanford, Director of Georgia Tech’s Center for Assistive Technology and Environmental Access (CATEA), recently announced the development of a simple and cost-effective way to modify existing digital camera imaging “chips” to transform them for use in multi-spectral imaging systems.

Engineers at CATEA have used this process to build a prototype multispectral camera based on a readily available CMOS imaging chip to target applications in fields of healthcare and medicine.

Aeroacoustics research could quiet unmanned aerial vehicles

Ranging in size from the huge Global Hawk aircraft to hand-held machines, Unmanned aerial vehicles (UAVs) are growing ever more vital to the U.S. armed forces in roles that are more vital to the U.S. armed forces in roles that are more vital to the U.S. armed forces in roles that are more vital to the U.S. armed forces.

In some instances, UAVs must fly close to their targets to gather data effectively and may evade enemy detection with sophisticated techniques like radar stealth, infrared stealth and special camouflage. Aeroacoustics researchers at the Georgia Tech Research Institute (GTRI) are investigating an additional kind of stealth that could also be vital to these UAVs—technology that can evade enemy ears.

Students Launch Audiball, an Xbox Community Game

Most students like to play video games, but Georgia Tech students Holden Link, Cory Johnson and Ian Guthridge have built and are selling their own. Their game, Audiball, was launched during the first week of Xbox Community Games in November.

The game uses either the Guitar Hero or Rock Band guitar controllers to create tunes and move balls from one target to another and eventually to a goal. The player uses the colored fret buttons to pick which target to shoot the balls from. The more goals scored, the more the tune changes. The player shoots multiple balls at once to score combo points, which changes the tune even more.
Moped multiplication
Gas-saving vehicles raise safety concerns

ROBERT NESMITH
COMMUNICATIONS & MARKETING

In the wake of $4-a-gallon gas, many students, faculty and staff have made the move away from cars and SUVs to scooters and mopeds. While not in the same league as motorcycles performance-wise, many of these vehicles carry the same legal requirements.

According to the Georgia Department of Driver Services (DDS), any scooter, motorbike, minibus or moped with an engine size of 51cc or greater is legally considered a motorcycle. A Class M (motorcycle) license is required to apply such vehicle with three wheels or less. State law also requires drivers to carry liability insurance of at least $25,000 for bodily injury and $50,000 for property damage.

Helmet use is also mandated by the state. The DDS offers motorcycle skills training and refresher courses regarding basic cycling safety. “Our goal is to make sure these individuals are aware of what they need to do to stay safe,” said Parking and Transportation Director Lance Lunsway. “Their safety is our number one priority.”

In this vein, Lunsway reiterates that all vehicles parking on campus require parking permits and should be registered—regardless of engine size—and must park in designated or assigned areas. Parking scooters, mopeds or motorbikes in building breezeways and on sidewalks is prohibited.

“It’s really an issue of campus safety for all,” Lunsway said. “Pedestrians, bikers and vehicles all must work together to create a safe campus environment.”

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Abowd named ACM fellow

The Association for Computing Machinery named College of Computing Professor Gregory Abowd as one of 44 fellows for 2008. Abowd was recognized for his “contributions to ubiquitous computing research, with emphasis for education, home and health.”

www.cc.gatech.edu

Dieker earns dissertation prize

Stewart School of Industrial and Systems Engineering Assistant Professor Antonius Dieker won the Gois de Leve Prize for best Dutch doctoral dissertation for 2006, 2007 and 2008 in the field of mathematics operations research. Dieker earned the prize Jan. 14 during a conference in Lunteren, The Netherlands.

www.isye.gatech.edu/news-events/

Honoros proposals due

The Georgia Tech Honors Program requests proposals for Special Topics Courses to be offered fall semester 2009. Topics carry no specific requirements, but the program seeks to challenge a small group of students to explore questions in partnership with instructors. Faculty members interested in submitting a proposal should receive tentative departmental approval and then submit proposals to Monica Halak (mhalak@gatech.edu) by Feb. 20.

www.honorosprogram.gatech.edu

UROP workshop, deadlines

The Undergraduate Research Opportunities Program and the Center for the Enhancement of Teaching and Learning is sponsoring a Feb. 10 workshop on "Mastering Mentoring: Creating Effective and Appropriate Projects for Undergraduate Research." The conference, for faculty, graduate students and post-doctoral employees, will be held from 11 a.m. to 1 p.m. in the Goodby Room of the Wardlaw Center. Also, Feb. 23 is the deadline for students to submit applications for the fourth annual Undergraduate Spring Symposium and Awards.

undergradresearch.gatech.edu

Williams, 14th Street closure

The intersection of Williams and 14th streets, including the Williams Street on-ramp to I-75/85 north, will be closed from 7 p.m. to 5 a.m., through Feb. 7.

www.14thstreetbridge.com

Institute

Crash course

OSP offers Sponsored Program Administration class

The Office of Sponsored Programs is offering its five core courses in research administration leading to the Departmental Certification in Sponsored Programs during its core course week. Departmental administrators who have responsibilities relating to sponsored research projects are invited to attend Feb. 24, 25 and 26. The Departmental Certification in Sponsored Programs consists of five core courses and two electives. Courses can be taken in any order, but must be completed within a two-year span. Required core courses include Proposal Preparation and Submission; Public Responsibility and Research Commitments; Budget Justification and Templates; Post Award Issues; and Grants and Contracts Accounting.

Every spring semester, OSP offers the five core courses in a two and a half day session. This is a great opportunity to take all of them at once. During the fall semester, courses are more spread out. “It’s also a good networking opportunity and offers a lot of information, especially for those who just came into a university setting,” OSP Training Manager Garrett Steed said. “We’re under a different set of regulations from most other businesses.”

After completing the required courses and at least two electives, participants demonstrate their proficiency by taking an “open book” test. “We expect people to get about a 90 percent or above. It’s pretty specific information and the rate of success is quite high.”

“Attendees learn how to correctly find, format, and complete a proposal, budget and other necessary forms,” Steed said. “A departmental administrator can acquire a serious overview of OSP, down to the nuts and bolts. It gives them more confidence in what they are doing and departments are improving internal processes as their administrators complete the certificate program.”

OSP assists principal investigators in applying for and administering research grants and contracts. All grants, contracts and cooperative agreements come through the office. OSP contracting officers work with sponsors that range from local state and federal governments to Department of Defense and other federal entities.

Certificate Program Core Course Week

Proposal Preparation and Submission: Covers general purpose guidelines and Institute processing procedures, such as funding sources, working with an OSP Contracting Officer, preparation of non-scientific justifications of a proposal. Feb. 24, 9 a.m. to noon

Budgeting, Budget Justification and Templates: How to develop a proposal budget and budget justification, while complying with Technological and funding agency policies. Feb. 24, 1 to 4 p.m.

Grants and Contracts Accounting: Explains the management process for sponsored projects. Feb. 25, 9 a.m. to noon

Public Responsibility and Research Commitments: Covers research compliance topics, including principal investigator (PI) responsibilities; research conduct; and university and federal policies and procedures. Feb. 25, 1 to 4 p.m.

Post Award Issues: Includes completion and closeout requirements for sponsored project awards. Feb. 26, 9 a.m. to noon

www osp gatech edu

For more information:

www parking.gatech edu

www.dds.gate.edu

EVENTS

FACULTY/STAFF DEVELOPMENT

February 3

The Office of Sponsored Programs hosts the "New Faculty Orientation to Sponsored Programs," from noon to 1:30 p.m. in the seminar room of the Research Administration Building.

www osp.gatech edu

February 5

The Office of Institutional Development presents the brown bag, "Performance Management Essentials: Coaching for Improved Performance," from 10 a.m. to 11:30 a.m. in the Crescent Room of the Student Center Commons.

www training.gatech.edu

February 12

The Office of Organizational Development presents the brown bag, "Performance Management Essentials: The Power of Goal Setting," from 10 a.m. to 11:30 a.m. in the Crescent Room of the Student Center Commons.

www training.gatech.edu

Ongoing

Georgia Tech Training Services offers a Web-based tutorial on using a state purchasing card.

www training.gatech.edu

Georgia Tech Training Services offers the Emergency Preparedness Certificate, consisting of required and elective courses.

www training.gatech.edu

MISCELLANEOUS

February 9

The Campus Recreation Center hosts "Night of Love" during the week leading up to Valentine’s Day. CRC members can enter into events during the week for free. Other events include Health Screenings Feb. 10–11 and a Love Song Karaoke Contest on Feb. 12.

www crc.gatech.edu

February 12

The Student Center Programs Council, Residence Hall Association and Student Government Association present "GT Night at the Aquarium." The Georgia Aquarium will be open exclusively for the Georgia Tech community from 6 to 10 p.m. Tickets are $15 for faculty and staff.

www buzzcard.gatech.edu

Ongoing

Technomasters, Georgia Tech’s division of Technical Services, meets each Thursday from 7:30 to 9 a.m. in room 102 of the Petit Microelectronics Research Center.

www technomasters.gatech.edu

Georgia Tech Faculty Women’s Club offers scholarships to Tech undergraduates who are children of faculty or staff. Up to five $1,000 scholarships will be offered, based on financial need and academic achievement. Applications are due by March 1. E-mail Marjan Van Ittersum at vanittersum@bellsouth.net.

For a more comprehensive listing of events updated daily, visit www.gatech.edu/calendar.
LYMAN HALL, continued from page 1

often include single parents and grandparents caring for their grandchildren. “When you’re single and taking care of five grandchildren, it’s tough to make ends meet. As another example, [we helped an employee] here who was out for a full year on medical leave.”

Kirk’s office will contact supervisors around the Institute and get a list of families with needs. Then each separate office adopts a particular family. “It’s completely anonymous,” he said. “We don’t know who they are.” He says that parents tend to ask for the essentials—clothing, personal items—but “are.” He says that parents tend to ask for the essentials—clothing, personal items—but are.” He says that parents tend to ask for the essentials—clothing, personal items—but are.” He says that parents tend to ask for the essentials—clothing, personal items—but are.” He says that parents tend to ask for the essentials—clothing, personal items—but are.” He says that parents tend to ask for the essentials—clothing, personal items—but are.” He says that parents tend to ask for the essentials—clothing, personal items—but are.” He says that parents tend to ask for the essentials—clothing, personal items—but are.”

In 2008, the group also gave to the Atlanta Community Food Bank, responding to the economic crunch. Attendees brought food or cash donations for the food bank as voluntary admission to the party. Nearly 360 pounds of food and $530 in cash were donated. “People were overly generous this year,” Kirk said. “I think they recognized the need was greater. [Overall] I wish we could have done more for the Atlanta Community Food Bank.”

Payroll Services, previously located in Lyman Hall, still actively participates, Kirk says. For their most recent gathering prior to winter break, the Office of the Provost and Office of the President in the Carnegie Building joined in for the first time. Nearly 175 people in all participated.

“Key people who made this work” included Business Services Manager Donna Castellini and Budget Office Administrative Coordinator Daphney Ross, who both coordinated the collection and distribution of donated items and party arrangements, and also LaZetta Sweeper Pits from Institutional Research and Planning, who organized donations from area vendors.

For others wanting to provide the same kind of aid, Kirk says it’s not that difficult. The Lyman Hall community approached supervisors in Auxiliary Services and Facilities to locate some families to help during the holidays. To ensure that most of vendors in 2008 went to the families and the shelter, with others given to staff as party door prizes. Donors such as Kraft Foods, Buckhead Life Restaurants, Chick-fil-A, Dave & Buster’s, Fernbank Museum, the Georgia Tech Hotel and Conference Center, Kroger Supermarket, Stone Mountain Park, The Punchline Comedy Club and The Varsity gave vouchers and gift cards for meals or special packages.

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The Lyman Hall community collected food (below left) and gifts for the Atlanta Day Shelter for Women and Children. The Atlanta Community Food Bank and several Tech families who needed help.

The money and resources go to where they can do the most good, the group minimizes the cost of the holiday party. “Tone down the party, and try to redirect resources into helping others,” Kirk says.

Offices that participated in the charity drive included Budget Planning and Administration, Institutional Research and Planning; Internal Auditing; Office of the Bursar; Business Services; Grants and Contracts, Financial Services; Controller, Environmental Health and Safety; Real Estate; Affiliated Programs, and Capital Planning and Space Management.

As the new year gets underway, the Lyman Hall community will continue aiding the shelter. “We must remind ourselves that our Georgia Tech neighbors’ needs continue, no matter what the season. We plan to renew our efforts next summer, as we have done in the past.” But Kirk says he and the rest of the group will be ready to give for the holiday season again.

GAMEDAY RECYCLING, continued from page 1

The initiative exceeded my expectations,” said Cindy Jackson, manager of Solid Waste Management and Recycling in Facilities. “Our goal was 10 tons for this year. The tailgaters were very receptive.”

Camps offices and organizations collaborating on the program included the Office of Solid Waste Management and Recycling, Landscape Services, Capital Planning and Space Management, the Athletic Hall Association, the Environmental Alliance at Georgia Tech, Student Government Association, Greek Affairs and Communications & Marketing.

“The student participation was amazing, as were all the organizations that came together on this,” Jackson said. “It takes these partnerships to make something like this work.”

Next year, Jackson says the goal is to start promoting the initiative earlier, as well as provide advance information to tailgaters and spectators, so they know what to expect.

For more information: www.recycle.gatech.edu

Eyes on the prize

During the Jan. 28 preliminary round of the Georgia Tech InVenture Prize competition, students presented their inventions to the community and an expert panel of judges. The top 10 percent of finalists will continue to the final round, held March 26, where one inventor and one team will receive a cash prize, free patent filings and a paid internship to work on realizing the invention.

www.inventureprize.gatech.edu

www.whistle.gatech.edu