Internet, particularly in developing economies such as mobile phones and the economic growth held by technology, highlighted the potential for global instability that will come as technology carries both promise and peril. The challenge... is how do we continue our relentless drive for dynamic technology which increases the capability of nations to compete in the world economy. We are the world's largest producer of technologies where an economic output of $1 billion in “e-government” services by establishing telecenters to provide the rural poor with critical information.

In his keynote address entitled “The Impact of Information and Communications Technologies (ICTs) on Economic Development, National Competitiveness and Social Justice,” former Senator and Justice.”

In defining the broad focus of the forum, former Senator and professor of International Affairs, Sam Nunn, said, “The world of technology carries both promise and peril. The challenge... is how do we continue our relentless drive for dynamic technology which increases productivity, disseminates information and gives us the capacity to raise millions of people into the middle class while avoiding the grave global instability that will come as technology highlights global inequalities for all the world to see.”

In his keynote address entitled “ICTs and Development: Promise and Peril,” Senator Kay Bailey Hutchison, a senior economist at the World Bank, highlighted the potential for global economic growth held by technologies such as mobile phones and the internet, particularly in developing countries. He also went on to identify the limitations to economic growth that can be directly affected by these technologies.

Kenny cited macroeconomic as well as microeconomic evidence from his work that correlates the rise in incomes in the developing world to the spread of ICTs, with a disclaimer that this growth may have had causes other than the proliferation of ICTs. One microeconomic example of an important ICT is mobile phone service, which has contributed to economic growth in Bangladesh, where individual rural women entrepreneurs can borrow credit to invest in mobile phones and sell them to their customers in their village. Such entrepreneurship has increased operators’ incomes to $700 per year, a figure that is twice that country’s income per capita.

Already recognized worldwide as an example of how ICTs can work to alleviate poverty as well as existing social barriers (against women, for example), the Bangladeshi model would not have been possible without the existence of local mobile footprints (areas with signal) in these remote areas. Such limitations in infrastructure might suggest a digital divide where infrastructure-rich, high-income countries are far better placed to make use of ICTs to improve businesses and lives than low-income countries. However, ICTs seem to be in reverse when placed in a more accurate perspective.

Indeed, there is mounting evidence, according to Kenny, that businesses in lower income countries are using one-rich, high-income countries are using ICTs more in proportion to their economic output than their counterparts in higher income countries. ICTs, such as internet and email, act as the great equalizer between workers across national boundaries.

Thomas Friedman, a New York Times columnist, outlines how the ongoing spread of ICTs is leveling the playing field for millions of citizens in India and China who now compete on relatively equal terms with citizens of developing countries, in his latest book, The World is Flat. However, there are limits to the influence these technologies have on growth, and it is an unabashed investment in technology alone is not a panacea. Even in India, home to the IT revolution, investment in these technologies contributed only 0.03% of all recent economic growth, according to Kenny. Even with improved access and broader language-specific content, growth sparked by ICTs will be limited. Furthermore, various studies of individual projects involving ICTs suggest that a one-size-fits-all approach to projects does not work, and many low-tech ICT solutions will work far better within local scenarios in relatively high-tech ones like choosing radio-supported instruction over computer-aided instruction in schools catering to low income students. A case-in-point is the recently announced decision (April 4, 2016) by the Rwandan government to invest $1 billion in “e-government” services by establishing telecenters to provide the rural poor with information critical to their livelihoods.

Since close to 80% of such e-government services have failed in various countries, the odds of success are tilted against the success of this venture, and its fate remains to be seen. In fact, ICTs can even have the negative effect of creating disaffection in lower income populations as they highlight disparities between their own lives and the lives of well-to-do citizens of high income countries.

According to Nunn, these disaffections can quickly morph into resentment or full-fledged hatred
MSA from page 15

“We thought that we shouldn’t just leave our Niger and Mali, so we talked to our community members. We felt it was important to make a community event versus just keeping it at the local level. We felt we must involve the entire community,” Bhatti said. MSA sought funding from the board of directors at a local masjid, or mosque, located in the area surrounding Tech’s campus. “They offered their support. From there we started planning,” Bhatti said. MSA soon realized that much more homework was needed for the project to be a success. The project’s culmination date was set for second semester.

“Money came from donations people [made] on the spot,” Mirza said. Overall, the night was centered on awareness of the suffering around the world. Imam Siraj Wahhaj, one of the most prominent leaders in America’s Muslim community, spoke at the event, along with Naeem Muhammad who was also a speaker for the evening. “Different speakers had slightly different focuses. One of the speakers was from the agency who received the money. He talked about the situation in Niger and Mali, showing [us] statistics and videos of what they were doing there. Our keynote [speaker] focused on how it was our duty as Muslims to help others, and unity among the Ummah—the community of believers and the Islamic world.”

“We mostly do dinners, lectures or some form of entertainment; the events are usually large-scale gatherings,” Mirza said. As president, Mirza is mainly responsible for executive work and managing the cabinet. He also ensures that proper communication occurs between the cabinet members.

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Matt Johnson, Jason Berg, Mac Young, Paul Wong and Kyle Ebbs (left to right) competed in Friday's drag show held by Pride Alliance to benefit CHRIS Kids, a local charity.

Drag queens from Tech, Emory and the Youth Pride organization paraded the stage of Amsterdam Avenue's Red Chair Restaurant last Friday. Sponsored by the Pride Alliance, the Glitter Pop Amateur Drag Show raised nearly $2,000, most of which will go to gay, lesbian, bisexual, transvestite and questioning (GLBTQ) children without homes.

After subtracting out the event's costs, Pride Alliance will donate the proceeds to the Rainbow Program of CHRIS Kids, a local charity that cares for homeless youth.

What exactly is a drag show? More than just a fancy-dress party, drag shows feature contestants dressed in clothing usually worn by the opposite sex. They perform dances to music, competing for the approval of the audience and judges.

The contestants are introduced on stage by their drag names, which indicate the sex they are impersonating. The two major judging categories at the Glitter Pop were appearance (makeup, hairstyle, poise, smile) and performance (choreography and coordination).

The event featured a total of six different acts, one of which was performed by a duo from Emory and five of which were solos. Four Tech students participated in the show, including Jason Berg, a second-year Management major, and Matt Johnson, a third-year Public Policy major.

The boys from Emory took first place, the contestant from Youth Pride took second place, and Berg, whose stage name was Alana Kellie, placed third. Berg danced to "These Boots Are Made For Walking," a song by Jessica Simpson.

"For me, this was the first time I ever did a drag show. I was really nervous the whole time," Berg said. "Once it was over, once everything was done, I really enjoyed it a lot. I got a lot of praise and good compliments." Berg described his experience as nerve-racking. Without any previously choreographed moves, he stepped onto the stage at the Red Chair. "I didn't know exactly what I was doing," he said. "I didn't really have much prepared, so I kind of winged it. I was actually a little late, so I ran from the dressing room right onto the stage."

Although he was unsure of what to expect going into the night, Berg said performing for charity felt great. "I'll probably do this again because it was really fun," he said.

Johnson, dressed as Ginger Snap during the show, performed to "Today 4 U," a song by the transvestite Angel from the movie Rent.

"It was definitely my first time (performing). It was fun doing it, but getting ready for it involved a lot of stress," Johnson said. "You can't imagine how difficult it is to shop for lady's shoes in Target—you get a lot of weird looks."

Although preparation for the show was difficult, Johnson said the experience was worthwhile. "The show was great; it was fun to watch and perform. I'm glad I was able to help raise the money for CHRIS Kids," he said.

Local businesses and organizations, including the James Madison Salon, the Flying Biscuit Café, Twelve and Youth Pride, sponsored the event. About 225 people—students and faculty from Tech and other members of the community—packed into the Red Chair last Friday, according to Sarabrynn Hudgins, recently elected vice president of Pride Alliance.

"From a money standpoint, it was definitely successful," Hudgins said. "We raised a lot of money, considering [the organizers were] just the members of the Pride Alliance executive board—a small group of students."

This year's show was the third that Pride Alliance had organized. Hudgins said that it was a significant improvement over last year's show, which faced some problems due to organization.

"We knew that we wanted the show to be more organized than last year," Hudgins said. "Last year, the venue canceled on us with a few hours left. The goal for this year was to have everything run more smoothly, and this year we brought a lot more people in."

"In terms of whether people had fun or not, they said they had a lot of fun," Hudgins said. "We did an awesome job."
Come and be a part of Earth Day! There are several ways to participate!

April 21, 2006 ~ 10:00 AM—2:00PM

Make Your Global Footprint!

www.earthday.gatech.edu

Office Supply Exchange

1) Clean out your supply closet now!
2) Drop off your excess office supplies at the Office of Solid Waste Management & Recycling April 11 and 13, between 11:00 AM and 1:00 PM (Go to: http://www.recycle.gatech.edu/find_us.php for directions);
   or bring your items to Earth Day!
3) 'Shop' for supplies that you need at Earth Day;
4) Only members of the GA Tech community (buzzcard ID required) can participate.

Sponsored by the Office of Solid Waste Management & Recycling

Nike Reuse-A-Shoe

1) Come to Earth Day and 'Shoe the Shoes!'
2) Have your picture taken with members of the GA Tech Track & Women's Basketball teams.
3) Any brand of athletic shoes will be accepted (No metal eyelets, spikes, cleats).

Sponsored by the Earth Day committee

Electronics (E-Waste) Recycling

1) Bring your old electronics to Earth Day
2) A complete list of acceptable items is available at www.earthday.gatech.edu
3) Only personal items, that DO NOT belong to GA Tech, will be accepted.

Sponsored by Atlantic Recycling Solutions, Interfraternity Council and Pan-Hellenic

Toner Cartridge Recycling

1) Don't throw away those empty cartridges!
2) Bring all of your empty ink & toner cartridges to Earth Day
3) Any make, model, color and size.

Sponsored by Cartridge World
Students, alumni, families and friends met this past Saturday at the parking lot of the Instructional Center for the third annual Georgia Tech Auto Show and enjoyed a rich collage of motor vehicles spanning a broad spectrum of years, types, styles and manufacturers. The lead organizer of the event was Sterling Skinner, director of the instructional laboratory at the School of Mechanical Engineering since 1992 and the faculty member responsible for most of the hands-on experiments in the department.

Skinner’s passion for motor vehicles comes from his father, who also got his master’s degree from Tech in the mid 1960s in Electrical Engineering. “I kept meeting people that were very interested in cars from all different angles, and one thing I noticed is that they never knew each other. I was constantly going to car shows and running into Georgia Tech graduates that claimed that nobody does anything going on here at Georgia Tech on automotive technology, so why not have a gigantic show and just bring people together?”

“More than a simple exposition of automobiles, the event attempted to bring Tech students, alumni and their families together. “The show is all about people meeting people,” Skinner said. “Georgia Tech alumni come back from all over the country to reunite with campus….This is an event where they bring their families [and] their grandchildren and meet students and other alumni with similar types of cars and interests,” he said.

Students were impressed with the number and classiness of the automobiles. “I haven’t seen this many different cars in a single place. It’s really neat to see how [the Auto Show] covers such a wide range of cars and how it involves the whole community,” said Matt Konopa, a graduate student in Aerospace Engineering, during his first visit of the Auto Show. “It’s not just students and people from Tech but also alumni and a lot of young kids being brought by their parent enthusiasts.”

The variety of automobiles at the Auto Show also highlights Tech students and alumni who have made an important contribution to the automotive field.

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The variety of automobiles at the Auto Show also highlights Tech students and alumni who have made an important contribution to the automotive field.
Weinberg designs electronic Beatbugs, robot drummer

Gil Weinberg, the director of the Music Technology program, poses with Haile, a robotic percussionist he created. Haile can analyze the music it hears and play along using computational algorithms.

By Trevor Stittlesburg
Staff Writer

The future of music may not be in strings and woodwinds. Gil Weinberg of Tech’s music department is directing research that focuses on using computer-aided music composition to allow anyone, no matter their background in music, to play instruments in a collaborative fashion.

Weinberg conducted research in music technology at MIT before receiving his Ph.D. in Media Arts and Sciences. He came to Tech in 2003 as director of Music Technology. His past projects have included “Beatbugs,” devices which look like toys but are actually electronic instruments the size of a hand with two “antennae” that control rhythm and pitch and a sensor that allows the player to tell the Beatbug to store the played rhythm as a motif. Beatbugs are played in collaboration with other players who can share motifs and play off each other. Weinberg developed them as part of his Ph.D. work at MIT, and they have been publicly displayed previously.

Last month, his research brought the Beatbugs and listen to how the four of us went to Israel and presented our projects,” Weinberg said.

Weinberg says, “I presented the history of the instruments being developed over the last six years and the different ways I’m exploring music technology. We had a set of different workshops. For the younger children, they mainly played with the instruments. They were able to record music and play the Beatbugs and listen to how the motifs it hears and thus play collaboratively with human players.”

For the more professional musicians, we opened our source code and showed them how this was done, and they had a lot of questions about software approaches and solutions we found. We allowed them to reprogram our instruments to change how the Beatbugs work. It was really a wide gamut of different activities,” he said.

One of the most striking projects that Weinberg is developing and demonstrated in Jerusalem last month was Haile, a robotic percussionist that can listen to other players, analyze the music it hears and play along with the music. The robot uses computational algorithms to vary the motifs it hears and thus play collaboratively with human players.

“The robot analyzes the movement of the sticks with time, changing the music from the electronic instruments in response. These public displays of Weinberg’s and others’ instruments characterize the music technology group’s approach to research.”

“By using our instruments, [children] do not have to have a technique to capture music they like...”

Gil Weinberg
Director of Music Tech.

As director of Music Technology, Weinberg has overseen the development of a new Master of Music Technology program that is currently being considered by the Board of Regents. This program will be the first degree offered by the Department of Music and will focus on “offering students here at Tech the ability to combine creativity and innovation, not only technically but creatively and artistically.”

“There are many students here that feel that they have the ability to be creative...and we are trying to offer these students a program where they can do just that,” Weinberg said.

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**WHERE WAS THIS WEEK’S PHOTO TAKEN?**

Email focus@technique.gatech.edu if you think you know the answer.

**Answer to previous Tech Up Close:**
A closeup of the Coulter Counter exhibit in the Whitaker Building.

**Last time’s winner:**
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**Autos from page 19**

automotive industry.

“We have an alumna here that designed a car that went on to win the 24 hours of Daytona in 2001. This car and others that specialize in endurance were designed by [Tech] alumna, very famous in the endurance prototype motor racing since the 1960s and fraternity brother of Tech President Wayne Clough,” Skinner said.

“We also have the Ford GT, a $250,000 super-car whose chassis, brakes, steering and suspension were designed by Tech alumnus Huibert Mees,” he said. “This year we started a tradition of having a caravan of Tech graduates that work for the automotive industry coming down from Detroit. [Friday] morning, six engineers from Chrysler, Ford and General Motors left driving the cars they have worked on.”

Mees was the guest speaker for last year’s Auto Show. This year the speaker was Italian alumna Franco Cimatti, a Mechanical Engineering graduate of 1981, who works as an engineering concept manager at Ferrari.

“He designs all the new Ferrari road cars. I sent him an email last year and invited him to be a guest speaker,” Skinner said. “He sent me a reply right back saying I would love to; I’ll bring my whole family and give a presentation on how I design Ferraris.”

Also at the Auto Show was a Ferrari 612 Scaglietti on which Cimatti performed extensive design work.

“(Cimatti) has had significant design influence in a lot of other Ferrari cars that came out like the 355 or the F-40. He also designed the steering wheel of the Enzo starting from a Formula 1 steering wheel modified to incorporate an airbag,” Skinner said.

A list of alumni that have made important contributions to the automotive industry, some of them not well known until now, can be found on the Auto Show webpage. For example, there is Roy Evans, a very big force in the design of the Jeep,” Sterling said. Evans is one of many alumni who have left their marks on the automotive industry. “He was a student in the 1920s here at Tech and went on to turn in the winning proposal at the [Armed Forces] that became the military Jeep just before World War II....Part of this event is about promoting that—the success that we [Tech] grads have achieved in the automotive industry,” he said.