I’d like to thank ODK and SGA for this opportunity to report to you on the State of the Institute. As usual, we have gathered some of the highlights of the past year in a little brochure that you received at the door, and I hope you will take time to read it. It is a supplement to my talk today, and covers much more than I will have time for.

The title of this year’s State of the Institute Address is “Innovation in a Changing World,” and I am going to begin with the end of that title – the changing world – and work my way backwards to the innovation part.

Twenty years ago is about the time many of you were born, so you don’t have much memory of it, but to an old fellow like me, it was not that long ago. If you look back 20 years, things were a little different than they are today. First of all, much of the technology you use daily and take for granted did not exist. Computers had no hard drives. The only way to save your work was on a five and one-half inch floppy disk. And those disks really were floppy – although it was not advisable, you could easily bend one in half. People didn’t have cell phones at all, let alone phones with text messaging capabilities or built-in digital cameras. In fact, there were no digital cameras. There was no dot-com economy to boom or to bust, because there was no commercial Internet.

There were also no terrorist threats in those days. What we feared was communism. The Berlin Wall was still standing, and the Cold War was still dividing the world into two political power blocks – the communist world of the East, anchored by the Soviet Union, and the democratic world of the West, anchored by the United States. Communication was limited between those two blocks, and few travelers or goods crossed those political barriers.

The world of the 21st century is shaping up to be a different place than just 20 years ago – a much more inter-connected place and at the same time much more competitive place. The end of the Cold War brought down more than the Berlin Wall. After the Soviet Union broke into its component republics in late 1991, the political barriers that had separated the world rapidly dissolved. At the same time, the proliferation of
telecommunications technology and the Internet opened up new avenues of inexpensive, real-time communication. Emerging nations like India, China, and Russia began investing in higher education and developing skilled workforces, and I’ll come back to that in a minute.

So, bearing these trends in mind and remembering how quickly the world changed over the past 20 years, let’s think ahead to the year 2020, when most of you will be entering the prime of your careers. Over the past few years I have been chairing an initiative of the National Engineering Academy called the Engineer of 2020, and we have been trying to imagine what the world will be like in two decades. As illustrated by that Bill Gates quote about nobody needing more than 640 K, it is very difficult to predict the future. Even the experts can get it wrong.

(SLIDE: WORLD OF 2020)
But there are some things that we can extrapolate into the future with a reasonable level of confidence. First, there will be a lot more people living on Planet Earth. There will also be some shifts in who they are and where they are. Until now, more of the world’s people have lived in rural areas. But by 2020, the balance will have shifted, and more of the world’s population will be in cities. This demographic shift has a second feature. Until 1965, the wealthy outnumbered the poor and middle-class in the cities of the world. But by the year 2020, the number of lower and middle-income people living in cities will outnumber the rich by more than three to one.

A second demographic shift that has already begun and will be played out over the next 20 years is that the population of developed nations like the United States and the European Union countries will age, while under-developed nations will experience a bulge in their young population. If you combine these trends, you can see that two decades from now we will have a lot of lower-income young people in the cities of the world that lack the economic, social, and physical infrastructure to support them.

(SLIDE: PROBLEMS)
Emerging population demographics like these are already bringing into focus many of the potential problems of the future. The pressure of an increasing world population on the natural environment will accelerate global warming and create water shortages. Between one-half and two-thirds of the world’s population is expected to experience water shortages by 2020. An aging population in developing nations raises issues of quality of life and health care. And what will happen when underdeveloped nations experience a burgeoning population of youth for whom they have no jobs?
But these problems are opportunities for an institution like Georgia Tech, because the rapid advance of technology holds out hope for their solution. Research in fields like biotechnology, nanotechnology, and environmentally sustainable technology will be the key to improving the quality of life for all of the Earth’s creatures. And that opens a door of opportunity for Georgia Tech.

During the 20th century, the United States was matched head-to-head with the Soviet Union in a bifurcated world. With the end of the Cold War and the dissolution of the Soviet Union, America emerged as the dominant power of the two. But in the 21st century, power is more likely to be measured in economic strength rather than military might. The United States may have the world’s biggest economy today, but by 2050, China will have overtaken us in size. A few moments ago, I mentioned that China and India are building high-tech economies and investing in skilled workforces. Together with the European Union, China and India are outpacing the United States in the production of engineers. As a result, we are seeing our lead in technology dwindle.

We cannot fault other nations for wanting to improve their standard of living and make themselves more competitive in the global economy. In fact, if they succeed it will open up new markets and new opportunities for partnership for us. No one has a corner on the market for ideas, and smart people doing interesting things in other places will give us new prospects for collaboration. But it is clear that to lead in this new, inter-connected global economy, we cannot offer the same old solutions. To win in the competitive marketplace of the 21st century, our solutions must be cost-effective, not because they are cheap, but because they offer value that makes them worth the cost.

Our competitive edge is in the highest possible leading-edge technological work. Our competitive edge is in engineering a level of detail and precision that meets ever-increasing specifications and provides a new level of consistency. Our competitive edge is in applying technology in creative ways to solve the problems and serve the needs of society, and in shaping public policies that that enable this process.

In short, our competitive edge is based on innovation. “Innovation” has become a buzzword that you hear a lot these days. And it is often used interchangeably with the word “invention,” but they are not the same thing. Invention can be done by the lone genius tinkering away in the garage or the garret. Innovation is a much more social activity that emerges at the intersection of technology with business and with the marketplace.
Innovation requires not only that we are first to discover new knowledge and invent new technology, but also that we are first to create new ways to put that technology to work within a complex legal, political, social, and economic landscape. At its most fundamental level, innovation creates new products, new companies, and new jobs. But it also functions on other levels to improve the quality of our lives in many ways and to enhance artistic expression.

The formula is invention plus insight. Innovation begins with targeted investment in fundamental research that is balanced across the science and engineering disciplines that are increasingly interacting with each other to produce new knowledge. Then innovation takes the new knowledge we discover and the new technology we invent and applies them in imaginative ways to create new solutions and new opportunities. Innovation also happens at the point where supply meets demand, so that our customer or audience actually becomes a collaborator in the process.

(SLIDE: MORSE, BELL)
Think back to the invention of the telegraph and telephone in the 19th century. Samuel Morse and Alexander Graham Bell were the stereotypical inventors, working away in their labs on a piece of technology, but their inventions became innovations that spawned today’s enormous telecommunications industry and changed the very character of our lives and our work.

Last February, the National Innovation Initiative, which I am co-chairing with IBM CEO Sam Palmisano, was launched right here at Georgia Tech. In our recent interim report, we identified five characteristics of innovation, and the telegraph and telephone meet them all. They were global phenomena whose impact still continues to be felt around the world. They were interdisciplinary, emerging at the intersection of different fields of research of spheres of activity. They sparked other inventions, and those inventions in turn played off of each other, leading to rich, multi-dimensional systems of innovation that involved many entrepreneurs and generated many companies.

They promoted a greater degree of interaction and openness among people, countries, and cultures. And they were a transformational force – not just for the companies that developed and marketed the many products and services that resulted, but for everyone – because they changed the way people everywhere lived, worked, and engaged with each other.

(SLIDE: WORLD LEADERS QUOTE)
What will be the equivalent inventions for our century? What inventions in biotechnology or nanotechnology will become the key transformational innovations
that spin off dozens of new products and change life as we know it down through the coming decades? And, more to the point, who will be in a position to drive that change? Because if somebody else is doing the driving, then we will be stuck tagging along behind.

The goal of the National Innovation Initiative is to move beyond talking and actually do something – to promote an action agenda that harnesses the factors and dynamics that promote innovation and helps to make the United States a leader in innovation.

That is our aspiration at Georgia Tech as well – to deliberately position ourselves to be a leader in innovation. Our goal is to define the technological university of the 21st century. That in itself will be an innovation that transforms other universities around the world. But if we succeed in this endeavor, we will also become the place where people look to see what the next big thing is – the place where some of the new interdisciplinary inventions are made that turn into the key transformational innovations of the century. This is a lofty goal, and if we are to have a chance to achieve it, we need to create a fertile environment for innovation. This morning I want to focus on some of the ways we are doing that.

In many ways, life at Georgia Tech is defined by tradition. The Whistle has blown at five minutes before the hour for more than a century. Successive generations of students have preserved the Ramblin’ Wreck in pristine condition. Freshmen still get Rat caps, and are still writing football scores on them.

But among Georgia Tech’s most prominent and enduring traditions are a “can-do” culture of entrepreneurism and a knack for creative problem-solving. These traditions are enabling Georgia Tech to transform itself into the innovative, nimble, international enterprise required to succeed and thrive in today’s rapidly changing global environment. And as society increasingly looks to science and technology to solve problems and create opportunities, Georgia Tech is stepping forward as a leader in using technology to serve humanity’s larger purposes.

This challenge is made more difficult by the fact that this is a time of tight financial resources for the state of Georgia. We have been experiencing cut after cut in state funding, which is our largest source of revenue to pay for academic programs at
Georgia Tech. With the latest reduction that we now face, our state funding will have fallen short by 27 percent over the past five years.

The level of state funding to public colleges and universities in Georgia is determined by a funding formula based on student enrollment and written into state law. This formula serves as a guide for the Board of Regents of the University System of Georgia as they set tuition rates. At Georgia Tech, state funding pays for just over half of the cost of our academic programs, while tuition covers a third, and the remainder comes from a variety of sources like gifts and endowment income.

Unfortunately, the cuts of the past four years have created a pattern in which state funding is not keeping up with enrollment growth. So we have less money to educate more students. We have been addressing the cuts by streamlining administrative functions, reducing programs, laying off staff, and increasing tuition, but the bigger issue is not knowing what to expect.

(SLIDE: GRAPH: SHORTFALL)
Each of these cuts was made in piecemeal fashion with the intent of balancing the state budget for the moment, but a cumulative pattern is forming that is causing a shift in the way public higher education is funded. If the state does not intend to honor its obligation to fund the enrollment formula in state law – and the governor has warned us that the formula is not likely to be fully funded in the future – then we are in need of a statewide policy discussion about how public higher education is to be funded in Georgia. Georgia Tech and the state’s other public colleges and universities need to be able to plan for quality and efficiency in the long run, and it is essential that we know we can expect from the state.

Most states are facing the similar budget constraints, and most public universities, as well as private schools like MIT, are also cutting budgets and raising tuition. In fact, Georgia Tech’s tuition is still a steal compared to our public peer universities around the nation. At the University of Michigan, Perdue, and Penn State, for example, tuition for in-state students is more than twice what it is here at Tech.

But we in Georgia are in serious need of a state-level discussion and some strategic policy decision-making regarding how we fund higher education in the future. SGA President Amy Phuong had an opportunity to meet with Governor Sonny Perdue earlier this month, and we hope to see more meetings like this to focus on where we are headed and discuss strategic changes in financing for higher education, rather than inadvertently backing into new policies as a result of piecemeal budget cuts.
In the meantime, here at Georgia Tech, the reality is that we are probably going to have to lay off some more staff and trim back some more programs. And over at Technology Square, the Board of Regents will consider a tuition increase at their meeting tomorrow. But we continue to be committed excellence. We will remain focused, achieve new efficiencies, and be strategic in making optimal use of the resources at our disposal. We will continue to work hard, to employ our team ethic, and to rely on the confident “can-do” attitude that is part of our heritage. And I believe that our strong positive momentum will carry us through to the time that will come when Georgia turns the corner and catches the next upward draft.

(SLIDE: OUTSTANDING PEOPLE)
Of course, the most significant resource Georgia Tech has at its disposal is outstanding people. Georgia Tech is a community of 22,000 people – about 16,800 students plus 5,000 faculty and staff. All of us are continually engaged in the process of broadening our knowledge, of making new discoveries, of learning new skills. And that is what makes Georgia Tech great.

(SLIDE: FRESHMEN)
The process begins with admitting one of the smartest, most well-rounded freshman classes of any public university in the United States. This year’s class is a little bigger than the past few years, mostly because more students than we expected accepted our invitation to enroll at Georgia Tech. But even as the class got a little bigger, it also got a little smarter, registering the highest average SAT score of any freshman class in our history. And it is also the most diverse class we have ever admitted, with more women, minorities, and international students than any prior class.

(SLIDE: STUDENTS SHINE)
Our students do not stop achieving after they get here. At the other end of the pipeline, our graduating seniors are winning some of the most prestigious scholarships and fellowships in the world. Blair Dowling is now at Princeton, beginning work on a Ph.D. Laurence Ralph, who won the Georgia Tech’s first major fellowship in the humanities, is at the University of Chicago. Gabe Brostow is one of only two Americans to receive this post-doctoral fellowship and is at Cambridge University doing post-doctoral research. Monique Gupta is also at Cambridge. And Jia Xu is at the London School of Economics and also plans to attend Imperial College.

(SLIDE: EXCELLING)
We are also proud of our student-athletes. Our basketball team was projected to finish seventh among the nine ACC teams, but instead became the first team from Georgia to play in the NCAA Division I-A Championship Game. The volleyball team was the first
ACC team to make it to the Elite Eight in the NCAA tournament. The golf team finished in the top five for the fourth time in the past five years.

In all, 15 of our 17 Division I-A teams qualified for post-season play. But at the same time the basketball team was making its amazing run through the brackets, five of its members were making the Dean’s List for spring semester. They joined 30 members of the football team and all six members of the golf squad, who have a cumulative GPA of 3.53. The women’s swim team is not far behind, with 19 of 20 members on the Dean’s List and a GPA of 3.49. All together 45 percent of Tech’s student-athletes are on the Dean’s List.

Staying on top of your game in class and on the court is not easy, but Georgia Tech is proving that it can be done, and done well. So, my hat is off to Georgia Tech’s student-athletes.

(SLIDE: CLUBS)
Georgia Tech fields only seventeen NCAA Division I-A teams, but that does not stop our students from competing with the best in the nation in any number of other sports. Despite having no scholarships or paid coaches, a number of Tech club teams compete against the best schools in the nation and come away winners. They demonstrate the discipline and determination that are characteristic of Georgia Tech students.

(SLIDE: CRC)
Club teams are an important part of student life, and the newly opened Campus Recreation Center and the Stamps Student Center Commons provide a significant improvement in the facilities that support campus life. Confirmation that these facilities meet an important need can be found in the hundreds of students who use them daily.

(SLIDE: FACULTY HONORED)
Our faculty is as outstanding as our students, and you can see in the brochure that they win a long list of awards and recognitions every year. Here are just a few of the most prestigious awards they received during the past year. Our young faculty are equally outstanding, winning 13 National Science Foundation CAREER Awards over the past year. This brings the cumulative total of CAREER Awards won by Georgia Tech faculty to 96 – second highest in the nation. The PECASE Award is a relatively new, and Julia Kubanek’s is the fifth for Georgia Tech.

(SLIDE: RANKINGS)
Our outstanding students and faculty are the primary reason Georgia Tech has been ranked among the nation’s top ten public universities every year since 1999.
Engineering remains among the top five programs in the nation, and we are beginning to see the payoff from our efforts to strengthen our other colleges. The College of Management has now tied the Terry College of Business at the University of Georgia, and our science disciplines are making steady progress. There are a literally hundreds of science programs out there and many well-established programs ahead of us on the list, but we are making tremendous progress. Of course, we always take rankings with a grain of salt, because a little tinkering here and there with the formulas that produce them can cause you to rise or fall when you haven’t changed one thing that you are actually doing. But they are a positive indicator of our progress.

(SLIDE: SOLVING PROBLEMS)
Of course, the point of our endeavors is not merely to be admired, but to become a leader in using technology to solve society’s problems. Innovation is global in nature, and as the world becomes more open and interconnected, opportunities are increasing for Georgia Tech to offer innovative solutions. As a result, we are stretching our learning environment to reach around the globe, giving an international flavor to the experiences we off our students.

(SLIDE: 4 CAMPUSES)
For starters, we have our own research and education platforms in Metz, France, and Singapore as well as a campus in Savannah. The international campuses began as graduate programs in engineering, but they are in the process of expanding. GT-Lorraine especially offers a unique opportunity to engineering students, who often have difficulty fitting a Study Abroad experience into a tight and specialized curriculum.

(SLIDE: SA GRAPH)
As Georgia Tech has expanded opportunities for its students to study abroad, students have responded. After a slight dip in reaction to the terrorist attacks and SARS, the number of Study Abroad students increased by 14 percent last year. By the time our students graduate, about one-third of them have participated in an international education program at some point in their undergraduate careers. The opportunities range from learning about animal behavior in Africa, to studying business and politics in Argentina and Brazil, or science and engineering at the Tokyo Institute of Technology.

In addition to giving students a chance to experience another culture, a number of programs offer them an opportunity to tackle serious problems. One group of faculty and students from Civil and Environmental Engineering traveled to Angola to survey and provide advice on the immense infrastructure and environmental problems caused by 30 years of war. Another group of 13 graduate students and three professors from
Tech’s City and Regional Planning Program in the College of Architecture went to Ecuador, to discuss and offer advice the problem of urban sprawl. These students see firsthand some of the problems their Tech education can help them solve.

.Schedule: Cross-Disciplinary
Another important aspect of innovation is that it is interdisciplinary, and that is also a central characteristic of Georgia Tech’s personality. As technology becomes increasingly ubiquitous, demand is growing for scientists and engineers who understand the broader social and cultural ramifications of their work and for practitioners in a wide range of other disciplines who understand technology. As a result, Georgia Tech offers students and faculty a growing list of interdisciplinary opportunities.

.Schedule: Innovative Programs
The Ivan Allen College has taken advantage of our interdisciplinary climate to create a number of unique cross-disciplinary programs. For example, a recent seminar sponsored by the McEver Program for Engineering and the Liberal Arts examined the intersection of engineering and the arts in the human body. Here you can see the Goliard Music Ensemble, which spent an evening with the seminar group exploring the use of technology in the form of musical instruments to create artistic expression and meaning.

Over the past five years, the School of Modern Languages created 61 new courses, many of them team-taught; launched two interdisciplinary degrees; and developed an innovative international internship program. And we were proud to have their accomplishments recognized by the Board of Regents.

TI:GER stands for Technological Innovation: Generating Economic Results. This program, based in the College of Management, is both an interdisciplinary and an inter-university endeavor. It brings together students in management, law, science, and engineering from Georgia Tech and Emory University to study the challenges of commercializing new technologies and marketing innovative products.

.Schedule: Professional
Georgia Tech is also a leader in creating interdisciplinary professional master’s degree programs, which are encouraged by several national organizations as a way to strengthen America’s scientific workforce and broaden the appeal of science and technology to students who are not interested in academic careers. We now have four of these degree programs. Although they are based in the College of Sciences, each one is a collaboration of at least three different schools or colleges. And as you can see, it is a broad-based effort. These very successful degree programs are models for other
universities around the nation who are trying to get some interdisciplinary degree programs going.

(SLIDE: INNOVATIVE)
Teamwork is an important skill in an interconnected, interdisciplinary world, and our students excel in innovative team endeavors. The Georgia Tech and Emory students who competed in the Idea-to-Product competition are from TI:GER. The Campus MovieFest is the world’s largest student film festival for which student teams are provided with equipment and produce a five-minute film within a short timeframe. And ARCHITech is a design program for middle-school kids created by graduate students in the College of Architecture.

(SLIDE: RESEARCH)
The foundation for the innovation process is the discovery of new ideas and the invention of new technology. And these days the frontiers of research are located in the spaces between the traditional academic disciplines. It is here that cross-disciplinary interaction often sparks new perspectives and new approaches.

(SLIDE: THRUSTS)
So Georgia Tech’s research is as collaborative as our educational programs. I made a list of our major science and technology research thrusts, and as you can see, every single one is an interdisciplinary endeavor. And when you add to this the research that goes on at the cusp of innovation in areas like public policy, international affairs, entrepreneurship, marketing, and transportation systems – all of which are required to bring the new ideas and inventions to fruition – the cross-disciplinary net is spread even wider. We are creating a fertile environment for generating some of discoveries and new technologies that will become the transformational innovations of the 21st century.

(SLIDE: SHUMING NIE)
Nanotechnology is especially multi-disciplinary and will literally touch every aspect of technology as it becomes more full-blown. Georgia Tech is applying its expertise in this new field to a wide range of disciplines from biomedical engineering to textiles to chemistry. Shuming Nie, for example, has been developing nanoparticles called quantum dots that attach themselves to cancer cells and give off a fluorescent glow, so that body-scanning technology can do a better job of early identification of cancer. His work is attracting attention and just last week received significant funding from the National Institutes of Health.
This ability to collaborate across disciplinary lines is a major factor in the strong and continuing growth in research awards and expenditures that Georgia Tech has experienced over the course of the past decade. We are among the nation’s top 35 research universities, and if you take out the ones that have medical schools, we are among the top five of these that remain.

As you can see, the research milestones of the past year are pretty impressive. We passed the $300 million mark in awards and the $400 million mark in expenditures. The biggest source of university research funding in the nation is the National Institutes of Health, and the $10 million grant I mentioned a moment ago is evidence of the great strides we are making in tapping into this funding source. Our 115 interdisciplinary centers and their $108 million in research activity is proof that we do more than pay lip service to interdisciplinary interaction.

Finally, we recently celebrated the grand opening of the Ovarian Cancer Institute on our campus. It was a touching moment for those who were there, as women who are fighting this often-fatal disease told their emotional stories. Georgia Tech’s research does not often bring us face-to-face with the people it serves, but the Ovarian Cancer Institute is one of those special places of close personal contact, and it really humanizes our endeavors.

Research discoveries and technology inventions do not become innovations until they are put to work in the commercial marketplace to improve our lives. This is where Georgia Tech’s life-long focus on driving economic development gives us an advantage over many of our counterparts. And during the past year we strengthened our hand with the creation of the Office of Economic Development and Technology Ventures to gather our many economic development endeavors under one umbrella and coordinate their efforts.

One of the programs under that umbrella is VentureLab, which is designed to identify ideas and technology from Georgia Tech labs that have market potential and shepherd them through the early stages of commercial development. VentureLab staff help faculty identify the best path to commercialization, and VentureLab Fellows, who are seasoned entrepreneurs, are on hand to mentor the process. Grants are available to support the development of a proof-of-concept or prototype product needed to help attract venture capital investment. VentureLab helped Biomedical Engineering
Professor Barbara Boyan attract venture capital funding for Orthonics, Inc., a new company which will commercialize spinal disc repair technology from her lab.

VentureLab also holds an annual Technology Day to showcase emerging technologies to investors. Jacket Micro Devices obtained venture capital funding after Technology Day 2003 last December featured its technology to improve wireless components while reducing both the size and cost.

(SLIDE: ADD ATDC)
Many of VentureLab’s most promising prospects got into incubation at another component of EDTV – the Advanced Technology Development Center. Here fledgling technology companies get the help they need to survive the launching stage. These two start-up companies in incubation at ATDC are developing products from technology created in Georgia Tech labs.

(SLIDE: PARTNERSHIPS)
Another characteristic of innovation in promoting openness and interaction, and Georgia Tech’s collaborative relationships stretch beyond our campus borders, reaching across town and around the world. Our most fully developed partnership is with our neighbor, Emory University. Informal research exchanges that began more than two decades have grown into the nation’s first joint academic department between a public and a private university – the Coulter School of Biomedical Engineering. Although this joint enterprise is officially only seven years old, it offers degrees at all levels, is home to the nation’s only National Science Foundation Center of Excellence in the Engineering of Living Tissues, and is ranked second in the nation by *U.S. News & World Report*. The school recently identified five key areas to focus its research with the goal of becoming an innovation leader in these areas.

(SLIDE: GLCC)
Our international partnerships are growing as well. I have already mentioned our campuses in France and Singapore, and the local governments there are our partners in place of the state of Georgia. In addition, the new Global Learning and Conference Center at Technology Square gives us the opportunity to develop long-distance partnerships. This fall we began a distance learning master’s degree program for GE employees at their Welch Technology Center in Bangalore, India. We also have many other international partnerships with universities ranging from the Technical University of Munich to Imperial College in London. We are working with a consortium of Israeli universities that are looking to us for help in developing expertise in nanotechnology, and we are discussion partnerships with two universities in China.
Of course, none of our partnerships or research discoveries or interdisciplinary courses will mean a thing if Earth’s growing population abuses the environment to the point where it can no meet the demands we make of it. Environmental sustainability is the field where all other endeavors are played out. So, Georgia Tech is committed to sustainability – in our education, research, and commercialization endeavors, and in the way we operate our own campus right here in Atlanta.

Our goal is to be a model of sustainability in the middle of a city that suffers from air quality problems, traffic gridlock, and an over-burdened sewer system. There are many aspects to sustainability, but one of the most visible and aesthetically pleasing is our endeavor to create a beautiful, walkable campus with strategic green spaces that offer opportunities for active and passive recreation. Georgia Tech’s campus is an eclectic mix of architectural styles, but we can strengthen its sense of place, enhance its beauty, and increase its sustainability with careful landscaping and by creating special places.

For example, the historic district along Cherry Street is one such special place. Not only does it have historic value for Georgia Tech, but its detailed and consistent architecture also help it to make a unique contribution to our identity.

Right beside the Historic District is Georgia Tech’s oldest special green space – the Quad. Designed as part of the original campus in 1885, this lawn served as a parade ground when we were engaged in training hundreds of military technical personnel during both world wars and is now an outdoor “living room” for the Tech family.

Tucked away between Cherry Street and the Skyles Building is Mayer Garden, a quiet, secluded area of natural beauty where students study or share a moment of conversation. On occasions, classes even meet here.

Our newest special place is the Green, a new lawn to the east of the Student Center that we were able to create after the old Hightower Building was taken down. Once our undergraduate learning center is built in a few years, it will help to frame this space as a true campus Green at the center of undergraduate life.
The Glade is tucked away behind the tennis center. When the weather is warm, I often host a reception there after commencement for the graduates and their families. And students sometimes tell me they never knew it was there. But it is a special place on our campus.

In the future, the Glade will be incorporated into what we are calling the “Eco-Commons” — a stretch of natural vegetation and wetlands across the northern part of campus, beginning near Burger Bowl and Hemphill Avenue and stretching through the Glade to the location of the outdoor tennis courts at 10th and Fowler. If you wonder why the tennis courts seem always to be wet and in need of resurfacing, it is because they are built on top of a former lake that seems determined to make a comeback. Our plan is to move courts and restore the lake. Not only will the Eco-Commons provide a beautiful natural area, but it will also help us to collect and manage rainwater run-off to use in irrigating our campus, reducing both the water that we draw from the city water system and the waste we send to the city sewers.

The final special place I want to mention is one that requires some imagination if you look at it today – the 5th Street Bridge that connects the main part of campus to Technology Square. The Department of Transportation is going to transform that bridge so that going to Technology Square will become a walk in the park. They will do half of the bridge at a time so that the bridge can stay open. That will take longer, but the result will be worth the wait. All of these special plans are included in our newly revised Campus Master Plan, which we will present to the Board of Regents tomorrow for approval.

As you can see, Georgia Tech faces both tremendous challenges and tremendous opportunities. We are challenged by the need to maintain excellence in the face of dwindling and uncertain state resources. We are challenged by tremendous competition from many other universities who also want to be the best, and some of them have been up there in the top tier much longer than we have. We are a relative newcomer among the likes of MIT, Stanford, and the University of Michigan, and in this company you have to run hard just to stay in the same place.

But we also have the advantage of outstanding people and a heritage of creative problem-solving and a “can-do” entrepreneurial spirit. Georgia Tech has always looked
to the future. No generation of Tech students was ever educated for the jobs of their parents.

Our quest to define the technological university of the 21st century is an expression of our intent to help drive the innovation of the future. In an age that cries out for technological leadership, we are building a solid reputation for innovation at the leading edge of the most significant new interdisciplinary fields. And in the process, we will help to shape a healthier, more sustainable, and more prosperous future for all of the inhabitants of this world of ours.