It is an honor to stand before you as your president and report on the state of the Georgia Institute of Technology. American playwright Thornton Wilder spoke of “standing on that razor edge between the past and the future,” and I feel like I’m there today, as we look back at the accomplishments of past year, then ahead at the challenges and goals before us.

The past year has been full of progress and achievement at Georgia Tech, and I am pleased to share the highlights with you today. I’m going to cover some of the high points in my remarks, and I hope you will take a look at the fuller accounting of them in this brochure which you received as you entered.

Over the course of the past year, we have been drafting a new strategic plan for the future of Georgia Tech. But as Cole Porter pointed out in his musical, “Paris,” if you want to have a future, you’ve got to have a past. So, in the process of deciding our goals for the future, we looked carefully at the past. We found that in many respects last year continued and reinforced strong positive trends. So, as I tell you about the past year, I am also going to include a few of the trends that have been developing over the past four or five, even the past ten years.

But first things first. Before we get to the charts and graphs, I have to tell you how outstanding our students really are. Dizzy Dean once said that “it ain’t bragging if you can back it up,” and I can back it up. Our students are winning awards and scholarships at the highest levels, not just here in Georgia, not just in the United States, but even in the international arena. The caliber of our students has never been higher, and it is a pleasure to be around such talented, creative young people.

We view our intercollegiate and club athletic programs as an important outlet for the talents of our students as well. Last year more of our intercollegiate teams and individual athletes made their respective NCAA regional championships than at any time in our history. This year we are adding women’s swimming – look for them to become a top program quickly.
We also are proud of the growing quality of the academic records of our student athletes who compete at the intercollegiate level, and this past spring their average grade point exceeded that of the student body as a whole by two tenths of a point.

And if you like rooting for the underdog, especially one that wins, look no further than our wonderful club teams. With no paid coaches, and no scholarships, these teams play for the sheer joy of it. Last year our hockey team came in third nationally in Division III hockey, and one of our men’s crew teams made it into the national finals and finished fourth after winning against a host of intercollegiate teams.

(SLIDE #4: MINORITY)
Last month was the 40th anniversary of the integration of Georgia Tech, an event notable because we were the first university in the deep South to voluntarily take this step. We have come a long way as evidenced by the fact that today we have more than 5,300 minority students – 34 percent of our student body.

We recognize it is important to be a leader in helping open our professions to minorities, so it was with great pride that we recently learned from the editor of the magazine, Black Issues in Higher Education, that last year Georgia Tech was number one in the nation in graduating African American engineers at the bachelors, masters and PhD levels. This is the first time in history any university has been number one at all degree levels, and the first time a university that is not a historic black institution has held the distinction. But, even as we enjoy the recognition of this accomplishment we also rededicate ourselves to the work ahead because the numbers are still not where they need to be.

(SLIDE #5: FRESHMEN DATA)
Georgia Tech’s popularity with prospective students is growing and this is reflected in an increasing numbers of applications to our freshman class. The quality of the students we admit shows a commensurate rise, both in SAT scores as well as high school accomplishments. It is a wonderful thing to be able to share the learning process with such bright young men and women and help prepare them for the future.

(SLIDE #6: GRAD DATA)
The trend in applications for admission to graduate studies is also up, and the caliber of our graduate students as indicated by their GRE scores is likewise rising. This year we had remarkable success in competing for the best graduate students in the land, and these talented young people will challenge our best faculty minds as they participate with us in the endeavor of research discovery and learning.
It should come as no surprise that our enrollments have increased, and you can see it in this chart. After holding relatively steady for the first half of the 90s, the pace began to pick up.

There are several interesting points embedded in this data. The increase we have experienced is attributable to several factors: 1. Increased retention at the undergraduate level, something we are working towards; 2. Growth at the graduate level due to maturation of some of our programs and, yes, an economy that is not hitting on all cylinders; 3. Growth of enrollments at our programs outside of Atlanta, including Savannah, Metz, and Singapore as well as over the Internet. Note that there is no growth in the incoming freshman class since we are holding this constant due to limitations in facilities such as freshmen labs. The growth we are experiencing largely reflects improved quality and engagement of our students, which we are planning for and encouraging.

Of course, when you have more students, you are going to need more faculty, and it has been a challenge to obtain the funding we need to do that. This past year we generated the resources we needed to achieve a substantive increase in new faculty, which you see reflected here. But we have done more than just increase the number of faculty. We are also hiring the very best faculty and this portends well for our future.

One of the more overt measures of the quality of a university’s young faculty is the number of CAREER Awards they have received from the National Science Foundation. CAREER Awards recognize young faculty with outstanding potential and provide them with resources to propel their academic careers forward during those critical early years. Last year Georgia Tech’s young faculty garnered 13 CAREER Awards, more than any other institution has ever received in a single year. Fifty-nine of our young faculty are now CAREER Award winners, one ahead of MIT and second only to the University of Illinois at Champaign-Urbana.

We are also fortunate to be able to attract outstanding senior faculty like those pictured here, many of whom were appointed to some of the fifty four endowed chairs created in our recently completed successful Capital Campaign. A total of sixteen endowed chairs and professorships were filled last year. Some of the eminent scholars who are choosing Georgia Tech are in these endowed chairs, while others have come to assume leadership positions, like school chairs.
(SLIDE #11: FACULTY AWARDS)
Our faculty also demonstrates its excellence in the awards it wins. We continue to increase our membership in the National Academies, and there are more to come given the growing recognition of the quality of our faculty. Our senior faculty are winning some of the most prestigious awards in their respective fields, and our outstanding young faculty are garnering support from Fulbright Awards and Sloan Fellowships to help them get established in their research fields.

(SLIDE #12: ADMINISTRATION)
Our faculty are not the only ones who are receiving broader recognition. I stated when I arrived that one of my goals was to have an administration as good as the faculty and students we serve. Over time we have grown and hired an outstanding administrative team here at Georgia Tech, and their leadership skills are being recognized by their peers in professional organizations around the nation. They are not only winning awards, but are being tapped for national and even international leadership roles. Much of what is accomplished at Georgia Tech is done behind the scenes by talented folks like these and their colleagues.

(SLIDE #13: ADMIN LEADERS)
We have also seen some administrative changes in the past year that will continue to move the Institute forward. Jean-Lou Chameau succeeds Mike Thomas as Provost and Vice President for Academic Affairs. Rich Meyer joined us from Trinity University as dean of libraries, and he is already in the thick of plans to expand the library and its technological capabilities. And Associate Dean of Engineering April Brown has replaced Mark Smith as executive assistant to the president. This position is held by a faculty member in a three to four year rotation, and it serves as a very important conduit between my office and the campus community.

(SLIDE #14: RESEARCH)
One area that continues to make increasing demands on all of us is the remarkable growth in the volume of research that we conduct. This year was another record high, reflecting the ability of our talented faculty and their staff and students to win intense national competitions for grants and contracts. Our cumulative research expenditures for the 2000-2001 year exceeded $300 million for the second year in a row, and we remained at the top nationally in the percentage of research done with industry.

(SLIDE #15: CASH GIVING)
Of course, all of this excellence implies strong financial support, and we have been blessed by generous alumni, corporate partners, and friends. Giving to universities takes many forms, from pledges to annuities to estate bequests. But if we look simply at the actual cash receipts we received from donors, you can see a remarkable rise, with the most recent surge due to the Campaign for Georgia Tech.
One of the endeavors supported by some of these gifts is a major effort to give Georgia Tech the campus facilities that are worthy of its students, faculty, staff, and aspirations. We have several significant facilities under construction right now, the most prominent of which is the Ford Motor Company Environmental Science and Technology Building on Ferst Drive to be completed next year.

This building is the second of four that will form the innovative Life Sciences/Technology Complex. Already in place is the Bioengineering/Biosciences Building, and coming in the near future are the Whitaker Biomedical Engineering Building, and the Molecular Science and Technology Building.

And the construction cranes will not be coming down any time soon. Over $500 million dollars in facilities will soon be underway, so you are going to see the number of cranes increase rather than decrease in the coming months and years. We will also soon have a satellite campus in Savannah for the Georgia Tech Regional Engineering Program. GTREP collaborates with Armstrong Atlantic and Savannah State Universities in Savannah and Georgia Southern University in Statesboro, to offer Georgia Tech degrees in civil, computer, and electrical engineering. Our partner institutions offer the first two years, and we have Georgia Tech faculty on site and use distance learning technology to complete the course requirements.

Our facilities are also designed to help us achieve our larger goals as an institution. The Campaign for Georgia Tech provided us with resources to achieve a higher level of excellence, and over the past year, faculty, students, staff, friends and alumni have spent hours discussing what we want to become as an institution, and identifying what we need to accomplish to achieve that higher level.

The result of those discussions was to craft an updated strategic plan for Georgia Tech that identifies seven critical areas in which we are going to focus our efforts. They are:

1. Student-focused education
2. Diverse community
3. Enhanced research enterprise
4. Expanded local, regional, and global outreach
5. Intelligent development of effective information and educational technology
6. Supportive, collaborative, effective administrative structure
7. Campus environment to match our Institute aspirations
Now, I realize I don’t have time to talk about all seven of these goals, and if I did, you would get tired of listening. So I am going to highlight three of them and tell you what we are doing and what we want to achieve. First, student-focused education.

(SLIDE #20: UNDERGRAD RESEARCH)

As you may recall, I used the forum of last year’s State of the Institute address to introduce a new initiative designed to strengthen and improve undergraduate education, we are going to continue working on that task during the coming year and the years after that. The research project carried out by mechanical engineering student Christyn Magill under the direction of Assistant Professor Marc Levenston provides an outstanding example of the contribution undergraduates can make to our research endeavors.

One of the central elements in last year’s plan was providing opportunities for undergraduates to participate in one of the central roles of a great research university, the discovery of knowledge. Last year I announced the creation of a fund to support undergraduate research projects, and during the course of the year, about 50 research projects received funding.

Beyond our central initiative, many of our academic units have developed their own outstanding focused undergraduate research programs which feature web clearinghouses where both faculty and students can post their interests and make connections with each other. The College of Computing, for example, has a well-developed research program, and about 10 percent of its undergraduates are engaged in research projects during the course of a year.

If we can reach the point of having 15 or 20 percent of undergraduates campus-wide participating in research projects at any given time, then we will be able to achieve our goal of half of our undergraduates engaging in research activity at some point along the way in their academic career.

(SLIDE #21: ILRC)

In addition to research opportunities, working with our faculty and administration, we have other initiatives underway to improve undergraduate education. One important element related to the physical environment for teaching and learning will be the new Innovative Learning Resources Center, which will be built adjacent to the library on the side toward the Student Center. This past spring we were successful in getting the Board of Regents to add this building to their construction list. It will take several years before funding is approved, but it is important for us to have it on our radar screens, because this is not just your father’s classroom building.

The new building is designed to fit the vision we have developed over the past several years for undergraduate education. The plan was created by a large group of faculty,
students, and academic administrators working together with a team of outside consultants with expertise in innovative learning facilities. The group visited a number of campuses and utilized what they learned from the experience of others. But in the end the plan was adapted to the unique nature of the educational environment at Georgia Tech. And we will not wait for the building to begin the new programs that will go into it. They will be taking shape in the meantime.

The building will serve as a hub for four interconnected activities with a particular focus on freshman and sophomore students. Space will be provided for technologically enhanced laboratories and classrooms, an information commons, support services for advising and related student activities, and for special programs that support improvement of teaching and learning, particularly those offered in our outstanding Center for the Enhancement of Teaching and Learning.

(SLIDE #22: LEADERSHIP)
Another piece of the picture in improving the undergraduate learning experience is our student leadership initiative. As the events of last September so tragically illustrated, never before has the need been so great for leaders with first rate technological abilities. What’s more, this new century demands a new style of leadership which emphasizes interdisciplinary teamwork, and the most effective leader is one who can define the problem, identify the necessary resources and get them to work together in concert to achieve the optimal solution.

A team of students and faculty, working with Robert McMath and Lee Wilcox, have been planning for Georgia Tech’s student leadership initiative over the course of the past two years. During our Capital Campaign we were fortunate create an endowed chair to help us secure the services of a top individual who can help drive this effort forward.

 keystroke) Today I am pleased to announce that Dr. Arnie Stancell has agreed to assume Georgia Tech’s new Turner Chair of Servant Leadership. Arnie, who received his Ph.D. from MIT, joined the Chemical Engineering faculty at Georgia Tech five years ago after a 30-year successful career at Mobil where he was a senior vice president. While at Tech he demonstrated his superb teaching abilities in his courses on thermodynamics, ethics and leadership. With his new appointment, we are asking him use his talents to benefit our larger community, something he has enthusiastically agreed to do.

(SLIDE #23: MIDTERM REPORT)
Which brings me to the final part of our efforts to improve undergraduate education that I want to emphasize today, and that is the mid-term progress report, which will happen for the first time this month. Our faculty endorsed this concept last year by an overwhelming vote. On Friday, October 12, faculty teaching 1000 and 2000 level
courses will indicate online with the registrar’s office whether the academic performance of the students in their courses is satisfactory or unsatisfactory.

But there is more to this effort than simply alerting students to their progress. All students who receive any unsatisfactory reports will be required to meet one-on-one with their academic advisors, and they will work together to make sure that a plan is developed to address the deficiency.

The mid-term reporting process addresses a need that was acknowledged by students and faculty alike. And figuring what to do and how to make it work has been a great team effort involving faculty, academic advisors, academic support staff, the registrar’s office, the counseling center in student affairs, and the dorm counselors in housing.

(SLIDE #24: MAP)
The second thrust of the Strategic Plan that I want to address is expanding our outreach activities, to the local community, the region, and the world. That’s a pretty big area to cover, so for today I am going to stick with the local community. Georgia Tech has not always been concerned about being a good neighbor. In fact, one of our early presidents fenced in the campus, with a white picket fence on the “front” of campus along North Avenue and barbed wire around the “back.” But it has to be said in our defense, that we were not always surrounded by elements that made us inclined to be neighborly. Today, all that is changing for the better.

(keystroke) To the north, we are developing new facilities for the Georgia Tech Research Corporation. The Aware Home blends in with the architecture of Home Park. And we are partnering with the Home Park Neighborhood Association to build a child care center.

(keystroke) To the southwest, we are demolishing decrepit buildings to create what will become the North Avenue Research Area. In cooperation with our neighbors around Antioch Baptist Church and the English Avenue area, we hope to help improve the environment for all of us. Our links to this historic neighborhood are already strong since more than 200 Georgia Tech employees live there.

(keystroke) To the south, the Techwood Housing Project has been replaced by mixed income townhouses. This attractive new neighborhood, called Centennial Place, where some of our students and employees live, includes a new YMCA and math/science magnet elementary school, both of which are recipients of extensive volunteer services from Georgia Tech.

(keystroke) To the east, we are reaching across the barrier created by the interstate to reconnect with the Midtown neighborhood. Midtown is rapidly becoming Atlanta’s signature high-tech corridor, and we are going to build an exciting development we call
Technology Square right in the middle of it along the south side of Fifth Street. Simultaneously with Technology Square, the Yamacraw Broadband Design Center and new facilities for the Advanced Technology Development Center will be under construction on the north side of Fifth Street.

(SLIDE #25: RENDERING)
Technology Square is such a wonderful project, that I cannot resist telling you more about it. The complex is designed to be pedestrian friendly, to accommodate a smooth flow of traffic, and to provide a stunning new gateway to campus across an improved Fifth Street Bridge.

(SLIDE #26: FOOTPRINT)
It will include new facilities for the DuPree College of Management and the Economic Development Institute, putting them in the midst of the business community. And it will bring together our rapidly growing continuing education and distance learning programs in a Global Learning Center. In addition to providing space for the continuing education classes that are now scattered at hotels all across town, this facility will contain the state-of-the-art technology we need to expand our distance learning outreach around the globe.

Technology Square will also include a hotel and conference center, which will be a resource for all of Georgia Tech as well as the new College of Management Executive Education Center and the Global Learning Center, for the Yamacraw Design Center and ATDC across the street, and for businesses and residents of the Midtown neighborhood. The Georgia Tech Bookstore will have a lot more space in Technology Square, and Barnes & Noble will develop it into the Southeast’s leading source of technology materials. And finally, the complex will provide light retail and restaurants along its sidewalks and a large parking facility at the rear.

(SLIDE #27: ELEVATIONS)
The architects have developed a look for Technology Square that is modern and high-tech, but at the same time blends in with the bricked design of our campus on the one side and the Biltmore on the other.

(SLIDE #28: MIDTOWN PARK)
The Yamacraw and ATDC buildings on the north side of Fifth Street will have the same feel to them. They are being developed by The University Financing Foundation, and are part of a mixed-use area called Midtown Park.

(SLIDE #29: SHOVELING)
We broke ground for Technology Square on September 6th, with a large crowd attending the gala occasion, and you could feel the excitement of the moment for all that this means to our future.
The third thrust of the Strategic Plan that I want to address is an enhanced research enterprise. To achieve our goals, we cannot simply focus on growth, or follow the lead of others. We have to be at the right places first and do it smarter than others by identifying the research thrusts of the future and bringing the best talent and resources to the task.

Much of the most important research of the future will be interdisciplinary in nature. We already have significant research underway in several interdisciplinary fields that have tremendous potential for the future. The key will be to identify the rainmakers and resources that will help us to coordinate our efforts and grow these initiatives into national significance. The development of biotechnology provides a case study that illustrates the kind of development we can and should strive for in all of these fields. So I want to take a few moments to tell that story.

Georgia Tech’s biotechnology initiative began with the creation of a single endowed chair some 13 years ago. Five years later, we added a master’s degree program, and had generated enough research in conjunction with Emory University to attract the attention of the Whitaker Foundation, which believed in us enough to give us its Biomedical Engineering Award.

In addition to prestige, the Whitaker Award provided $3 million, of which $1 million was for facilities and the remainder was used to add more faculty and begin a PhD program. Then the Campaign for Georgia Tech got underway. And Pete Petit, who had endowed the first chair a decade earlier and was watching the program grow, provided a second, larger endowment for the Petit Institute for Bioengineering and Bioscience. A year later, we had a second endowed chair, and Don Giddens came on board to chair the newly created joint academic department in biomedical engineering, which is a rare partnership between and public and a private institution.

Our expanding size and expertise captured the attention of the National Science Foundation, enabling us to secure the nation’s first and only NSF Center of Excellence in the Engineering of Living Tissues. By this time, we also had a large building under construction that was recognized by the international magazine Nature for its innovative, flexible interdisciplinary research neighborhoods.
At the same time, we continued to broaden our areas of expertise to include bioinformatics, which will be critical to interpreting and using the data provided by the mapping of the human genome.

The biotechnology initiative was also broadened in another direction with the addition of technology transfer resources. David Ku, a faculty member with joint appointments at Georgia Tech and Emory and two biotech business start-ups, connected the program to the College of Management’s entrepreneurship programs. And Em-Tech Bio was created to spark the development of biotech companies. It includes an incubator run by Georgia Tech’s Advanced Technology Development Center.

The tremendous potential of our growing biomedical engineering program continued to appeal to the Whitaker Foundation and was a magnet for the Wallace H. Coulter Foundation, named for the Georgia Tech alumnus whose Coulter Counter is one of the most-used medical diagnostic tools in the world. Significant gifts from both of these foundations are supporting a major expansion of what is now named the Wallace H. Coulter Department of Biomedical Engineering.

This fall we enrolled our first class of 40 undergraduates in Coulter Department. As a result of this cumulative growth process in research, academic programs and facilities, Georgia Tech is positioned to be a full participant in Governor Barnes’ cancer initiative, funded with $1 billion from the state’s tobacco settlement. But we’re not done yet. The growing Coulter Department will soon have a new home in the Whitaker Building, with construction slated to begin next year.

And if you widen the picture, you can see that we have helped to put Atlanta on the national map as the only significant cluster of biotech activity in the Southeast. Of course we are still a yellow dot, listed among those who rank 15th to 20th. But we are there – a young newcomer among the traditional powerhouses of the Northeast and California.

Biotechnology provides a case study of how to home-grow a future-looking multifaceted interdisciplinary program with all the elements of research, education at all degree levels, facilities, and technology transfer. And I believe Georgia Tech has tremendous potential to do the same thing in other significant interdisciplinary areas like nanoscience and nanotechnology, advanced communications, global technopreneurship, sustainable technology, and emergency response, which has an international policy aspect to it as well as science and technology.
These are important fields where we must excel if we are to define the technological university of the 21st century. But the reason we strive for that goal is not simply to be proud of achieving it. We strive to define the technological university of the 21st century because of the opportunity and the capability it will provide to shape futures through innovation – the futures of our students, our Institute, and the citizens of our community, state, nation and world.

In a few short hours on September 11, we experienced a national tragedy that undermined in some measure the confidence our nation had felt entering the 21st century. On Friday, September 14, which the President declared a national day of mourning, the Tech community gathered in the Student Center Plaza for a service of remembrance, just as others did all across the nation. And in the days and weeks since then, America has experienced a powerful outpouring of resources and effort aimed at easing the suffering and righting the wrongs of that tragedy.

However, for the Georgia Tech community, that effort is not just a one-time response to a single tragic event. In a larger sense and in the longer term, it is our ongoing, daily task. Each day, all of us work together to stretch the boundaries of knowledge a tiny bit farther. And that endeavor is what will enable us to discover the science, and develop the technology, the management strategies, the policies, and the structures that will enable us to shape a prosperous and sustainable future.