I’m pleased to be here with my fellow Rotarians in the original city of the metro region. Georgia Tech has over 4,500 alumni living in this community – so many that we have an alumni club just for DeKalb County. Andrew Harris is one of the many Georgia Tech faculty and staff who live in this community and contribute to it, and we are proud of their involvement.

I come from a small town and visiting Decatur takes me back. Even though you are located in the shadow of Atlanta’s skyscrapers and completely surrounded by her suburbs, downtown Decatur still retains its small-town charm. Whenever I come here, I always feel that things might be just a little slower, a little calmer, a little friendlier here, in that way that small towns have.

You demonstrate so well something that we try to do at Georgia Tech – to hold fast to what is valuable and good about our past and our traditions, while at the same time living in the present and looking to the future.

Mark Twain once said that even when you’re on the right track, you’ll get run over if you don’t keep moving. I would add that even when you’re moving down the right track, if you’re not at the front of the train, the scenery ahead of you never changes. And here in metro Atlanta, we are poised to move to the front of the train – to become a leader in the high-tech global economy of the new millennium.

Sixty years ago, Franklin Roosevelt called the South the nation’s number one economic problem. Today, the respected British magazine The Economist calls the South “the locomotive powering the American economy.” I was born in South Georgia, and my lifetime spans this remarkable period. Unless we completely mess things up, we are on our way towards escaping the evils of poverty and backwardness that characterized the South when I was a child.

Georgia Tech has a unique role to play in putting Atlanta and Georgia at the front of the train. We were founded 115 years ago to help Georgia’s economy make the shift from agrarian to industrial, and today we are helping with the next transition, from an industrial to a technology-based economy.

Today, high-technology industries are driving economic growth and they are critical in gauging the performance of our economy. It used to be that a community’s economic vigor was determined by the presence of large, international companies. That has changed, and innovative economic activity is now concentrating in communities that have a cluster of high-tech industry.

One of the primary benefits of advanced communications is that location can become irrelevant, but that premise does not hold true for high-tech industry itself. High-tech economic development is remarkably concentrated, strongly focusing on particular locations. Silicon Valley, Boston, and Research Triangle in North Carolina are a few of the best-known.

So a branch of economics has emerged called “new economic geography” to figure out what makes high-tech economic development cluster where it does. So far the conclusion is that high-
Tech industries congregate where they do based on many factors interacting in a complex environment.

These factors include an educated workforce, research universities, venture capital, an existing network of suppliers and related industries, a high quality of life, a population of sophisticated consumers who push demand for cutting-edge products, and even factors like the cost of living and the climate.

These factors form the basic shopping list for any community that aspires to become a high-tech center, and we are fortunate to have most of them here in metro Atlanta. But we are not trying to clone Silicon Valley. Beyond these basic factors, we are trying to identify what we are good at and can do better than other high tech centers.

Silicon Valley had the asset of lots of undeveloped land, while we already have more sprawl than we can deal with. They allowed technology development to outrun corporate citizenship, and their high-tech industries are now being criticized for their insensitivity to community needs. And they are beginning to feel the effects of what some call a “talent war,” and have sounded a warning that they cannot get enough engineers and scientists to do the work that is waiting to be done.

Here in Atlanta, we want to learn from Silicon Valley, then guide our own development in ways that avoid their problems and utilize our unique resources. And if we do it well, in 10 or 15 years Silicon Valley might just look at Atlanta and say, “Why didn’t we think of that?”

But to get to that point, we must identify cutting-edge areas of research and technology where we are strong and concentrate on developing those fields. We must expand our research and educate the skilled workforce that will create and attract industries in those fields. And we must make good use of a couple of intangible resources that are actually pretty unique to Georgia.

One of those resources is the ability of Georgia’s industries, state government and research universities work more closely together than in many other states. The hard economic facts of global competition are making it more difficult for our industry to invest in long-term research, and research partnerships between business and higher education are becoming more critical. The demand for an educated workforce also calls for a closer partnership with between business and higher education. And Georgia is good at these kinds of partnerships.

One reason we are good at them is because we are making a relatively recent and rapid surge from the economic backwaters into the forefront. We are the new kid on the national economic block, kind of like a start-up company, and that enables us to move with more nimbleness and flexibility than the traditional, well-established economic centers, who are locked into old-wealth structures. Nimbleness is a decided advantage in an economy where the pace is escalating… where complacency is death and complexity is slow death.

Let me give you a few examples of what I mean, starting with the Georgia Research Alliance. At a time when federal and industry research investments are dwindling, Georgia has taken
advantage of its knack for collaboration to create a partnership among industry, state government and research universities.

The Georgia Research Alliance promotes and coordinates research among six research universities, including Emory University and Georgia Tech, to strengthen and expand three high-tech industries that we are good at – biotechnology, environmental technology and advanced communications.

All of its research projects are partnerships between two or more of the six schools, and while it is conducted at the universities, the research is coordinated through an industrial advisory board. Research Alliance funds are also expected to leverage additional support from industrial and federal government sources. To date the $240 million invested by the state has leveraged $550 million from the federal government and private industry to make an $800 million investment.

The Research Alliance works in close collaboration with the state’s economic development entities to help in moving industry to Georgia. And to help speed the creation of start-up companies from the research, the Research Alliance is linked with the Advanced Technology Development Center, Georgia’s high tech business incubator that is operated by Georgia Tech.

The Advanced Technology Development Center operates two high-tech incubators in Atlanta, and a third will soon open as part of the Emory/GT Biotechnology Park that will be located where the Georgia Mental Health Institute used to be.

This technology park is one expression of the close working partnership that exists between Emory University and Georgia Tech. In addition to incubating start-up biotech companies, we also conduct joint research in biotechnology through the Research Alliance, and in a joint National Center of Excellence for the Engineering of Living Tissues, funded by the National Science Foundation. And we educate students in a joint academic department of bioengineering, which is a rare occurrence between a public and a private university.

Another example of how we are taking advantage of our strengths to position ourselves for high-tech leadership is the Yamacraw Mission. I’ve already mentioned the talent shortage that is beginning to plague high-tech industries. In Georgia, we have developed a strategic plan to educate a workforce in high-tech fields that we are good at, helping our state emerge as a major high-tech center in those areas.

If you remember your Georgia history, Yamacraw was the bluff along the Savannah River where the first Georgia pioneers landed and launched a whole new chapter in the life of our state that changed it dramatically. In this new application, Yamacraw is a codeword for industries that deal with the combination of hardware and software, or the combination of microchips and electronics. In essence, Yamacraw is about the creation of intelligent devices that will underlie virtually all of the electronics, computing, communications and entertainment technology of the future.

A good example is the device I am holding in my hand. It is about the size of a half-dollar, but it holds 350 megabytes of data and allows for super-fast storage and retrieval. A newer version
will be out shortly that will hold a gigabyte. So one of these tiny little things is about to have as much memory as the 22-pound hard drive of a state-of-the-art computer had just five years ago. You will soon be plugging these little storage devices into computers, palm pilots, cameras and all kinds of other products that have microchips.

This little device is just a forerunner of the electronic and computer tools of the future that Yamacraw is focused on. And the industries that produce and service these tools have become the fastest growing segment of America’s economy. Their rapid growth is the result of a significant change in business investment patterns. In 1970, information technology represented 7% of the money American businesses spent for equipment. Today information technology accounts for more than half of the equipment expenditures businesses make.

The most essential ingredient in attracting these leading-edge electronics companies to Georgia is a skilled workforce. So Yamacraw will educate computer and electronic design engineers, who will be able to make the intelligent devices that will underlie the electronic products of the future.

Governor Roy Barnes is committed to investing $70 million over the next five years to add 85 new faculty to our University System in areas related to optical networks, broadband technology and signal conditioning. That investment will enable the University System to produce 2000 more design engineers and computer scientists a year by the year 2005.

Georgia Tech is the lead educational institution in Yamacraw, and we join Governor Barnes and University System Chancellor Portch in believing that Yamacraw is a key element in Georgia’s gaining its share of the new economy.

The Georgia Research Alliance and the Yamacraw Mission reflect our belief that higher education has become the most important economic development infrastructure a state can have. Last spring US News & World Report named Georgia Tech’s School of Engineering third best in the nation behind only MIT and Stanford in graduate engineering programs. That made us very proud, but it means more to us than just a reputation we can brag about. It is also an expression of our commitment to educating the quality workforce and conducting the quality research that will create high-tech start-ups and attract high-tech industry to Georgia.

Georgia’s economic growth over the past decade has been strong. We have significantly outpaced the nation in population growth, employment growth and growth of per capita income. But at Georgia Tech we believe that Georgia has not yet reached our full economic strength or realized our economic potential.

We believe Georgia can get even better and do even more to capitalize on our opportunities and utilize our resources with an eye to the future, so that we move into the 21st century on the leading economic edge. If Georgia Tech can help Georgia do that, then we will have realized our mission and achieved our potential.