

REMARKS BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH
SCORE Luncheon, Dunwoody Country Club, 12/9/99

I'm pleased to be here and have a chance to commend and thank you for volunteering to mentor Atlanta's small companies. It is always edifying to learn from our own mistakes, but it is just as edifying and less painful to learn from other people's mistakes. And that is what you do for our business entrepreneurs – help them to avoid making mistakes that would create problems for them or even do them in.

That is an important contribution to economic development in Georgia, because the majority of our businesses are small. Small businesses account for two-thirds of our jobs. Even the ones that aren't so small, started out small. The Coca-Cola Company, for example, was born in an Atlanta drug store.

Small business is also the leading edge of economic growth, the place where most of our new jobs are created. So you might say that small business is big business. The health and growth of Georgia's small companies are critical to the economic prosperity of the entire state. And you make an important contribution to it by mentoring Georgia's small businesses.

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. 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. This week's *Atlanta Business Chronicle* reports that Georgia ranks fourth among the states and Atlanta third among the nation's cities as entrepreneurial hot spots.

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. Your careers as business leaders spanned this same time period, and your collective leadership helped turn Georgia from the caboose into the engine of the train.

We have experienced one of the most remarkable and rapidly changing economic eras in history. The end of the Cold War and the rapid emergence of a global economy have been powerful forces that have caused industry to make drastic changes just to survive. Large government programs and entire segments of our economy literally disappeared. New products and services emerged using alternative technologies and skill sets.

The pace of technological innovation has become incredibly rapid, which creates plenty of openings for something or someone new to get a foot in the door. As a result, the economy has become entrepreneurial. This new economy is also consumer-driven. The industrial ideal is no

longer to achieve the standardization of products, but do continuous improvisation and customization.

Industry has been changed forever by these experiences. Entrepreneurs, start-up businesses and venture capitalists have taken over the tasks of producing jobs and creating wealth.

Georgia Tech has a unique role to play in putting Atlanta and Georgia at the front of this new economic train. SCORE gives all kinds of help to all kinds of businesses. Our role is more narrowly focused on technology, and I'd like to tell you a little bit about it.

We were founded 115 years ago to help Georgia's economy make the shift from agrarian to industrial. Today we are helping with the next transition, from an industrial to a technology-based economy.

One of the most important ways we do that is by educating the technological leaders of the 21st century. We are a technological university with 14,000 students, and we rank among the top ten public universities in the nation. We are also America's largest producer of engineers, graduating more than 2,000 each year.

Our job of educating technological leaders has been changing along with the economy. When I was an undergraduate at Georgia Tech three decades ago, my fellow students used to discuss which large corporation they would work for and what the pension plan looked like. Today, we have to help our students envision themselves as entrepreneurs running successful start-up companies.

Further, all of today's industries, not just the new start-ups, must be nimble and creative to survive. Ford Motor Company CEO Jacques Nasser says that if his company doesn't respond quickly to consumers' needs, it won't be around five years from now.

Innovation and time to market are crucial. Hewlett Packard reports that 60% of their sales today come from products introduced in only the last two years. IBM talks about the life of its products in "web-months" which are equal to three calendar months each. Complacency is death and complexity is slow death.

So even the largest corporations are looking for engineers who think like entrepreneurs. In addition to being technically competent, engineers must also be creative in problem-solving, perceptive about the global economy, knowledgeable about management and able to communicate their ideas effectively.

I know that you are coming up against the need for skills like these in the businesses you mentor, and they are also the skills we try to instill in our students.

Another example of how Georgia Tech's educational programs will help Georgia take advantage of our strengths to position ourselves for high-tech leadership is the Yamacraw Mission. High-tech industries are plagued with a growing talent shortage, and 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 their arrival 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. We want to make Georgia a center for the creation of intelligent devices that will underlie virtually all of the electronics, computing, communications and entertainment technology of the future.

We will do that by providing research and venture capital. But, more importantly, we will provide the skilled computer scientists and engineers these industries demand.

Many states have taken the “Field of Dreams” approach: “Build it and they will come.” In Georgia, we are doing the reverse. We are going to provide the players first, because we believe their presence will help to attract the industries and the infrastructure.

Another way Georgia Tech promotes high-tech economic development is through leading edge research that both attracts existing high-tech companies and spins off new companies. Last year we conducted \$280 million in sponsored research, which makes us about 28th among the nation’s research universities. But we work more closely with industry than the typical research university, and we rank fourth in the nation in research activity that is sponsored by private industry.

Georgia Tech is one of six universities in the Georgia Research Alliance, which promotes and coordinates research among its member universities to strengthen and expand three high-tech industries that we are already 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 \$600 million from the federal government and private industry for a total investment of more than \$800 million.

The Research Alliance works in close collaboration with the state’s economic development entities to help move 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/Georgia Tech Biotechnology Park that will be

located where the Georgia Mental Health Institute used to be. Another incubator is in operation in Warner Robins, and we will soon have one in Savannah.

Research scientists who make new discoveries seldom have the business expertise they need to commercialize those discoveries into marketable products. So the ATDC helps them with management and marketing, and even incubates many of them until they have at least 10 employees and earn at least \$1 million a year.

We also help “landing parties,” which come from larger corporations that are spinning off a new, high-tech subsidiary. When corporations are looking for locations for these new spin-offs, the services of ATDC make Georgia a very attractive place to put them.

Last year, the companies affiliated with ATDC earned \$350 million and employed 4,000 people. They attracted \$73 million in investment, and that number will be even higher this year.

The Emory/Georgia Tech Biotechnology Park, where we are opening an incubator, is just 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.

But Georgia Tech’s economic development programs do more than serve young high-tech companies. There is no such thing as a low-tech company anymore. These days every industry needs advanced technology to survive.

So the Georgia Tech Economic Development Institute has a network of 19 economic development offices around the state, staffed by experienced industrial engineers, who are available to assist Georgia’s small and mid-sized companies improve productivity, reduce costs, plan expansions, start new operations and implement proven manufacturing technologies.

Our Economic Development Institute, the Yamacraw Mission, the Georgia Research Alliance, and the ATDC all 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 our state 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.