REMARKS BY DR. G. WAYNE CLOUGH
Columbus Rotary Club, March 17, 1999

I was here in Columbus last month to visit with my fellow Georgia Tech alumni, and I am happy to be back today to visit with my fellow Rotarians today. Happy St. Patrick’s Day to you. This is a special day for me since it is my anniversary – 37 years since my wife and I married in my junior year at Georgia Tech!

I always enjoy catching up with a long list of Georgia Tech friends who are Columbus folks -- Bill Turner, Jimmy Blanchard, Rick Usery, Don Leeburn, Tom Buck, Calvin Smyre, Ed Sprouse and many others. But I also look forward to coming to Columbus, because this is such a dynamic community.

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.

Those of us who visit Columbus periodically can literally see the scenery change. The new Total Systems campus is preparing to open… the school construction program is unfolding… the River Center for the Performing Arts, Heritage Park, and other community projects are taking shape.

But your scenery also changes in the figurative sense, because you are at the front of the train. This is one of the hottest mid-sized cities in the South and your businesses are among the most responsible corporate citizens, contributing to this community and its quality of life in ways to make other cities envious. Of course it is not just me saying it, since Fortune magazine recently named Synovus as the best company to work for anywhere in America.
You have put this community at the front of the train by mastering three arts: the art of taking what you already have and making it into an asset; the art of respecting and listening to creative thinkers; and the art of teamwork and collaboration.

We try to emulate those same three arts at Georgia Tech. We tend to use a different vocabulary – with words like “entrepreneurial,” “interdisciplinary” and “innovative” – but it amounts to the same thing. Our objective is to not only put Georgia Tech at the front of the train, but to help do the same for the State of Georgia.

One indicator of my theme was found in a front page article in the AJC stating that Georgia is now number ten in the nation in numbers of high tech jobs, up from 16th place in 1990. Later in the AJC story it stated that Georgia was one of only a handful of states that had a positive growth rate in producing high tech graduates from its educational system. This may sound a bit odd, but consider that nationally the numbers of engineering graduates declined by 20% since 1986, and the trend downwards is continuing outside of Georgia. Yet at Georgia Tech, our engineering enrollments have run against the grain, increasing by 20% since 1986, and are they accelerating upwards. A result, Georgia is one of only a handful of states in the nation to have experienced an increase in output of engineers since 1986.

Beyond filling the talent gap, we have worked to support the state’s growing high tech industry through our own strategies and in combination with those of the State of Georgia, the Atlanta Metro Chamber of Commerce, the Georgia Research Alliance and the University System of Georgia. These strategies are paying off in the development of a new economy for the State as indicated in the AJC article.
All of this suggests that we have made a lot of progress, but is it natural to ask how we can continue our momentum. Put another way, how can Georgia move into the top five in high tech jobs? One answer is the Yamacraw Mission, which I know you will understand because it is a larger scale version of the ICAPP project you pioneered in this community. We know, just as you do, that the key to the future is talent. Silicon Valley is scrambling right now, because they are running out of talent. Recognizing its problem, the university system in California is committing to a 20% increase in engineering graduates by the year 2005.

But Yamacraw is designed to keep us on the fast track no matter what others do. This initiative was undertaken by spending six-months just to seeking to define what our strengths were so that we were not just duplicating or trying to replicate what someone else was doing. The study indicated three areas of emerging technologies where Georgia had strength when compared to any region either nationally or internationally: broadband technology, content control and optical networks.

These findings were a pleasant surprise for two reasons. First, Georgia Tech was identified as a key player in the strengths that were identified and it confirmed that our investments and those of the Georgia Research Alliance in facilities and faculty in these areas over the past ten years were on target. Second, the areas identified were not tied to a particular technology, but rather underlay what will be needed for technologies for commercial electronics, computers, telecommunications and entertainment. Thus, our strengths match up with those required for the essential components of the basis of the new economy.

The next step in Yamacraw was to define what it takes to be a winner in this high end sector of the economy, and the conclusion was that we need a sizable workforce of design engineers and
computer scientists who have specially tailored skills. So the goal of the Yamacraw Mission is bold, to produce 2,000 of these specially tailored design engineers and computer scientists per year by the year 2004. Most will come through a traditional four-year college programs, many from Georgia Tech but also from other schools as well; others will come from related fields and get the training they need from continuing education courses.

The Yamacraw Mission ties together state government, the Georgia Research Alliance, higher education and private industry as partners. And we are very pleased and excited to have the strong support of Governor Barnes and the Georgia General Assembly. Also, I would like to acknowledge the tremendous leadership by Jimmy Blanchard in his role as the Chair of the Board of GRA. Without Jimmy we would probably not have Yamacraw.

Both your ICAPP project and the Yamacraw Mission are part of a bigger effort to keep Georgia’s economic edge as we move into the next century. And I don’t think I am biased in saying that Georgia Tech plays an important role in that effort:

- **Talent** – as we already know, is the key. 14,000 top students; largest freshman class in history... more GA residents than any time in history... graduate 2,500 engineers a year... over 100 students come from Muscogee and the surrounding counties; including seven Presidential Scholars and ten Bradley Turner Leadership Scholars. Georgia Tech also benefits from the students who are in the Regents Engineering Transfer Program who start here at Columbus State University.

- **Research** - $255 million in research expenditures last year... increased every year for the past five years, and on track for another record this year... chosen to be the leading national center of research in several areas – electronic packaging,
photovoltaics, manufacturing, broadband technologies, and this past year, in the development of the next generation semiconductors.

- **Outreach** – Last year our 19 regional economic development offices, EDI, assisted more than 1,100 companies. Here in Columbus, have worked with a wide range of companies, including Morton Machine Works, Industrial Metal Fabricators, Tom’s Foods, Precision Components International, Charbroil and Polychrome. Regional Director John Mills has been on site with a company this morning, but was able to break away for lunch and be here with us.

Talent, research, outreach and Yamacraw represent the strategy to take Georgia to the next level.

Without question we are prepared to educate Georgia Tech students to be ready to support the coming technological revolution. Yet our challenge as an educational institution goes deeper than that. Not long ago, Tech alum Sam Nunn gave a graduation address to our students and said they were bound to be leaders in society, but if they wanted to become a “hell of an engineer,” they also had to work to become a “hell of a parent,” a “hell of a citizen,” and a “hell of a civic volunteer.” What Sam was saying was that with technology becoming so important to society now and in the future, our students had to prepare to be more than just technologically competent.

Our mission has to be to educate the whole person, and not just a narrow slice of their intellect. It is imperative for Georgia Tech students to understand technology’s human dimensions, and to realize that to lead is to serve. And here in Columbus there are some great role models to be found here in folks like Bill Turner and Jimmy Blanchard.
What drives this point home is the thought that so many of those who are emerging as super-rich from the technology business boom are not imbued with the understanding of the need to give back to the society that made them, or to help those less fortunate. A recent Fortune magazine article described how the wealthy “technocrats” of Silicon Valley are ignoring the homeless of their community. Silicon Valley is not poor. It is a place of plenty, with BMWs on the highways and caviar in the grocery stores. But it has come to be divided into two separate economies. In the privacy of their personal lives, its “technocrats” live in an economy of abundance. But in its civic life as a community, Silicon Valley is short on the things that make life truly worth living. Contrast that to what you are doing here in Columbus to insure that you are creating a true community for all of your citizens.

At Georgia Tech we want to create a culture where every student is encouraged and challenged to be involved in community service activities to help prepare them for positions of leadership in life after Tech. Fortunately, our students are leading the way.

Picture a crisp, sunny, fall day. The campus is abuzz with Yellow Jackets. Football Saturday? No. The team for this day is Team Buzz – made up of 2000 students, faculty and staff who are participating in Georgia Tech’s now Annual Community Service Day. Students started this annual event.

Or picture an inner-city elementary school bristling with technology. You’ll find this very model at Centennial Place School across the street from our campus, and Georgia Tech is a partner with that school. We helped to develop the math and science curriculum. We are providing the support of the technological systems, and a Georgia Tech public service co-op student is there every day to maintain them and help the students and teachers use them.
Beyond specific volunteer efforts we are adding curriculum elements that reinforce leadership and civic involvement for all of our students. We are creating a chair in servant leadership to bring business, government and university leaders to campus who will interact with our students and teach classes to inculcate the values needed to be a committed citizen in a world dominated by technology. We hope to extend the chair concept into an Institute for Technological Leadership and Civic Responsibility which will elevate our efforts to impact technological leaders at the national level.

Lee Schulman said that “the core meaning of a profession is the organized practice of complex knowledge and skills in the service of others.” Our challenge at Georgia Tech is to help our students see the importance of using their intellect and technological skills to serve others. If we can do this while helping lead Georgia into the era of a new economy, then we will have given our state the full measure of our potential. We look forward to working with the good citizens of Columbus towards this goal.