

What: Consulting Engineers Council of Georgia

When: Thursday, April 27

Good evening. It is a pleasure to speak to the Consulting Engineers Council of Georgia and an honor to speak to so many men and women who have made a difference in the field of engineering.

Like you, I too am an engineer. Thirty-five years ago, I first came to Georgia Tech with the desire to become a civil engineer and builder of the infrastructure of society. It is a particularly proud moment in my life to be able to return to Georgia Tech as the first alumnus to be president. I also feel particularly fortunate. There are more than 96,000 graduates of Tech; for me to be named the first alumnus to act as president gives me new faith in my belief that one day Ed McMahan and his prize patrol will show up at my door and declare me a Publisher's Clearing House winner.

There have been many changes at Tech since I graduated more than 30 years ago. And, as we move toward the 21st century, there will be more changes still as we strive to meet the needs of the communities we serve.

I am reminded of a story of the seaman who had just been promoted to captain. Late one night he was steering his ship when he saw ahead of him what looked like the lights of another ship coming straight for him. He immediately wired to the other ship the instructions: "Change your course 10 degrees!" The reply came

back: “Change your course 10 degrees!” Angry, the new captain signaled: “I’m a captain, change your course to the south.” The reply came back: “I’m a seaman first class, change your course to the north.” Now enraged, then new captain signaled back: “I’m on a battleship...change your course or else.”

The reply came back: “And I say change your course north, I’m in a lighthouse.”

Recent changes in higher education, such as demands for accountability from students and parents, have put some universities on a collision course with the shore — much like that poor captain. Unwilling in some cases and unable in others, many universities have refused to acknowledge a new course for the university within higher education. I believe that Georgia Tech has the opportunity to be one of the fortunate few that will use these times of challenge to advantage if it works hard and wisely, and has the support of the external constituencies who represent its stakeholders, and the Consulting Engineers of Georgia are prominent among out stakeholders.

What has changed within higher education?

First, our universities are no longer insulated from the effects of the globalization of industry and business, the changing demography of our citizenry, the mores of families and values transmitted to students, and the way in which our young people are taught to think and

learn. All of these factors affect how the effectiveness of our teaching and potentially call for modifying how we do our business.

Second, support for research in this country in a broad sense is being downsized and directed towards winning the economic war, not the cold war. Universities are not being spared from these impacts and they can be substantial given our investments in research today.

Third, there is the growing importance of technology in the day-to-day lives of all Americans, a trend that has large implications for Georgia Tech.

Fourth, students and parents have changed in the way they view the university. Hikes in tuition coupled with a competitive job market have caused students and parents to search out value in education and enroll in institutions that can offer them a practical academic experience that prepares them for the workplace. Here in Georgia this trend has a special dynamic with the HOPE scholarship program which makes higher education, and especially a Georgia Tech education, a bargain like no other in the country.

Finally, universities are being asked by businesses and industries produce graduates who can work in teams, are adaptable, are resolute in the face of difficulty, understand ethics, and are “street-smart,” and at the same time simply brighter than the others.

This country is clearly in the midst of a fundamental shift in society and universities will be part of it whether they want to or not. Some universities will be winners and others losers depending on how they respond to these developments. I believe Georgia Tech is well positioned to be one of the winners, although this is not a given and the stakes are high.

Before I speak to the issue of what we can expect for the future, let me tell you my impressions of Georgia Tech engineering after returning from a campus absence of 30 years. I am pleased to have as part of the Institute one of the best Colleges of Engineering in the nation. We face the changing environment with a College of Engineering that is characterized by excellence - we have had strong leadership provided by a series of fine deans, including Bill Sangster for 17 years, and now John White. Under John's leadership, the College has made great strides to adapt to our changing world. Our faculty have worked very hard to achieve both national excellence while serving the educational needs of our students and fulfilling our obligations to service in the state. They do all of this with a funding base that is minimal, and I can state this categorically having had the experience that allows me the context to make this judgement.

Given the circumstances at Georgia Tech in terms of state funding the level of accomplishment is impressive. Let me cite some recent successes: Rankings; the NSF PRC; the MARC.; SUCCEED; 12 members of our faculty are now in the NAE.

We also serve the state's engineering education needs. We eventually enroll 80% of the Ga state residents who apply to us through a combination of direct admissions, assisted admissions using a summer bridge program, and freshmen and sophomore transfers from other institutions within the state. As to the latter we are working hard to improve this process and fully expect to double the numbers of students using this avenue of admissions.

Our engineering curricula are being modified in innovative programs to provide students with the skills that our profession says are needed. However, such efforts are not accomplished in short order since it requires time to define a new curriculum, and at a minimum, four years for someone to graduate from it. While new generational graduates are emerging, experience shows that Georgia Tech students have been desired by industry because they are some of the brightest and best problem solvers in the country.

We will also recognize that it is part of our future to provide the multidisciplinary education in new emergent fields while serving the traditional professions. Thus we offer studies in fields such as bioengineering, biomedical engineering, and computer engineering. Thanks to the broad range of classes available, Georgia Tech students have those qualifications. Engineering students are encouraged and even required in some cases, to take classes in the Ivan Allen College of Management, Policy, and International Affairs and the Colleges of Computing, Sciences, and Architecture.

What does the future hold? More change and hard work to adapt to it. We understand this and are seeking in a logical way to address the issues. Thus, we are engaged in Institute wide strategic planning; We are working with the Chancellors Office in a state-wide needs assessment for delivery of engineering education to the state. We will be engaged in the future in a more comprehensive effort to use distance education and transfer programs.

We also know that we cannot fulfill our goal as an educator of Georgia's children, if students who graduate from Georgia high schools are not ready for Georgia Tech. Therefore, we have a huge stake in Georgia's K-12 system. Already we have summer programs set up for math and science teachers — helping them improve their knowledge and giving them ideas about how to take that knowledge back into the classroom.

We have also teamed up with business and industry in joint research programs. In the past, most university research was funded by government. Fully 30% of our research today is with the industry - comment on the unique scope of our operations; EDI, ATDC, GTRI, RI. Work with new and traditional industries to develop new jobs in GA. New - with help of GRA, moving strongly into biotech, telecommunications.

Through its industrial extension service, EDI has been helping Georgia businesses since 1961. There are currently 18 EDI field offices providing technical and managerial assistance to business and

industry throughout Georgia. From the agricultural counties of south Georgia to the carpet and fiber manufacturers located in the mountains of North Georgia, our business managers, computer experts, and engineers are working for Georgia — and helping Georgia businesses grow. More than 1,300 firms annually receive assistance — mostly at no cost.

A small unit of EDI, Tech's Advanced Technology Development Center, ATDC, was founded in 1980 to stimulate the technology business base in Georgia. ATDC fulfills this objective by providing business assistance to start-up technology companies, supporting technology commercialization ventures, and assisting in economic development efforts.

Finally, it is not possible to talk about Georgia Tech's future without mentioning our participation in the 1996 Olympic and ParaOlympic Games. I understand that many of you are doing design work for the Olympics so I'm sure you'll understand the thrill of being a part of such an important part of Georgia's history. In our role as the Olympic Village and host for two Olympic venues -- swimming and boxing— we will achieve a degree of visibility never before felt by Georgia Tech. It is our goal to make the most of that attention.

- Largest building project in Tech's history (we will owe \$150 million and have raised \$25 million of this from private sources - it is not state funded, nor is it free!)**
- Leave a lasting legacy — Buildings and FutureNet**

I will close by saying that I am excited about the future at Georgia Tech. We are working to continue to be an institution of great strength to the State of Georgia and the engineering profession. We will do this by continuing to be a university recognized for national excellence, which at the same time serves our state and its citizens. We recognize the need for change and are moving forward with appropriate actions. To reach our goals we look forward to working with you and understanding your needs. We also seek your support if we are to advance our partnership.

Thank you.