

KEYNOTE ADDRESS

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Center for Paper Business and Industry Studies

May 1, 2001

Thank you, Jim Ferris, for kind introduction.

I'm pleased to be here to celebrate the opening of the Center for Paper Business and Industry Studies. This partnership brings together Georgia Tech, the Institute for Paper Science and Technology and the Alfred P. Sloan Foundation – three organizations that share many of the same goals and ideals, and already have a history of partnership.

Of course, the oldest part of the partnership is paper itself. The creation of paper was officially marked by the Imperial Court of China in 105 AD, but the actual invention is suspected to have taken place several hundred years earlier. Paper is one of the few things from that early civilization that still has a central place in our modern lives, and seems to be increasing even as some predict its disappearance.

Today each person in the United States consumes about 700 pounds of paper a year. Much of it is still in its obvious and traditional form – newspapers, magazines, books, letters, legal documents, tickets, paper bags, cardboard boxes, even paper dolls and game boards. But an increasing amount is less obvious – batteries, laminated kitchen counters, wallboard, automobile air bags, cars, computers, and even aircraft and NASA heat shields. The passengers on the Starship Enterprise of the future might not be paper pushers in the traditional sense, but they will be surrounded by paper all the same.

The history of pine forests in Georgia is probably even older than the history of paper. But 240 years after the first American paper mill was established, this state still had no paper industry, because the resin and pine gum in southern pines prevented them from being pulped. It was not until a workable pulping process was developed in the 1930s that Georgia's pulp and paper industry was born.

The immediate effect of that innovation was to provide southern farmers with an instant cash crop that enabled many of them to weather the Great Depression. The long-term effect was that today Georgia has the most commercial timberland of any state in the nation – 23 million acres. And to go with it, a massive forest-based industry that employs 177,000 people and generates \$20 billion in annual revenues. Pulp and paper are an important part of that industry, accounting for half of the state's forestry output.

Just as Georgia leads the nation in commercial timber, so the United States leads the world in paper production. Its 500 paper mills produce about 87 million metric tons of paper products each year, which is almost a third of the world's output.

Of the three organizations that come together in the Center for Paper Business and Industry Studies, Georgia Tech is the oldest. Tech was created by the state legislature in 1885 as the centerpiece of the state's plan for industrial resurgence after the Civil War – a time when the South was struggling to catch up with the rapid pace of industrialization underway in the rest of the nation.

That mission to make the state more economically competitive continues today, and Georgia Tech's focus on economic development is perhaps more central than any other research university in the nation. Our institutional culture, in the President's office and throughout our academic units, is oriented toward outreach and engagement with society in general and industry in particular to solve problems.

Through the years, this strong orientation has resulted in a wide array of working partnerships with private industry. Tech ranks fourth in the nation in industry-sponsored research, and in some campus units as much as 40 percent of the research is sponsored by industry.

In addition to leading-edge research, Georgia Tech manages a state initiative called the Traditional Industries Program, which engages public universities around the state in helping to solve practical, shorter-term problems for traditional industries, including the pulp and paper industry.

The second partner is the Institute of Paper Science and Technology, an institution for research and graduate education in the disciplines that come together in the paper-making process. It was founded in 1929 in Appleton, Wisconsin, which is another paper manufacturing center. A decade ago, IPST moved to Atlanta and onto the campus of Georgia Tech.

This partnership has served both of us well. IPST students and professors have access to Georgia Tech's broader resources and opportunities in science and technology, and Georgia Tech students and professors benefit from the in-depth knowledge offered by IPST in the chemical processes and technologies of the paper industry.

The results are evident, for example, in new technology developed by a professor at IPST who is also an adjunct professor with Georgia Tech's Woodruff School of Mechanical Engineering to strengthen paper fiber while simultaneously lowering the

energy cost of producing it. VORTIGEN technology is now licensed to start-up company incubated in Georgia Tech's Advanced Technology Development Center for commercialization. It is expected to rank as one of the top industry advances in more than 25 years.

The third partner in this center is the Alfred P. Sloan Foundation, which is also no stranger to Georgia Tech. The Sloan Foundation has generously supported a number of initiatives on our campus, including graduate fellowships for minority students and the development of the nation's first Internet M.S. in ME, which was designed especially for Internet delivery using state-of-the-art multi-media technologies. We presently have two Sloan Fellows on our faculty: Rigoberto Hernandez and Robert Dickson, both in chemistry and biochemistry. This prestigious two-year award recognizes and supports young faculty who have shown independent creativity in their research.

Georgia Tech, Sloan, and IPST share similar a mindset. All of us have a focus on science and technology education and innovation and a focus on putting innovation to work to serve society and promote economic development.

Georgia Tech's long-time relationships with industry expressed in variety of interdisciplinary centers on campus that receive strong private sector support to address issues facing industry, for example: Manufacturing Research Center, Microelectronics Research Center, Georgia Center for Advanced Telecommunications Technology, Petit Institute for Bioengineering and Bioscience, Packaging Research Center, Institute for Sustainable Technology and Development.

These centers reflect growing interdisciplinary culture at Georgia Tech. The hottest research areas, new fields emerging in the gaps between disciplines, and Georgia Tech is on leading edge. We are pioneers in biotechnology, nanotechnology, environmental science and technology, and we are interdisciplinary from the ground up with new facilities that are designed to be interdisciplinary. We are also interdisciplinary in bringing our management and policy expertise to industry as it tries to compete in a rapidly changing, global, technological marketplace.

The Center for Paper Business and Industry Studies – CPBIS – is one of 16 Industry Study Centers Sloan is funding on 12 university campuses to create academic study and support communities around particular industries. The goal is to encourage a direct approach to study, data collection, and observation of these industries.

The interdisciplinary dynamics of Georgia Tech and IPST come together in CPBIS. The Center will enable IPST and Georgia Tech to expand beyond dealing with the scientific

and technological aspects of the paper industry to also address its business and management needs. CPBIS brings the research and expertise of the School of History, Technology, and Society in the Ivan Allen College to bear on the paper industry, which enables a holistic approach to the paper industry – to look at management and policy issues that face the industry, and at the broader social context of the global economy in which the industry must compete.

CPBIS will focus on business fundamentals that impact the paper industry in five areas: globalization, commercialization, workplace transformation, enterprise effectiveness, and community interactions. The Center has already begun its work, holding two informal seminars: “The Environment, Public Policy and the Paper Industry” on March 27 and “Fiber Supply: The Life Blood of the Forest Products Industry” on April 24.

On behalf of Georgia Tech, I would like to thank Dr. Jim Ferris, president of IPST; Dr. Jim McNutt, executive director of CPBIS, who came to this endeavor from being CEO of one of nation’s top consulting firms for the paper industry; Dr. Tom McDonough, senior research fellow at IPST who will serve as the center’s director; Dr. Gail Pesyna of the Sloan Foundation; and from Georgia Tech Dean Sue Rosser of the Ivan Allen College and Dr. Gus Giebelhaus of the School of History, Technology, and Society.