

REMARKS BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH
Georgia Information Sharing and Integration Forum
October 16, 2002

I'm pleased to join in welcoming all of you to Georgia Tech for this Information Sharing and Integration Forum. I hope you enjoy your visit to our campus, or this part of it. The IPST is actually an organization with ties to Georgia Tech, but not part of it, although we are exploring the possibility of merging IPST into Georgia Tech.

Georgia Tech is known for its excellent engineering programs, with our College of Engineering ranked among the top five in the nation and all of our engineering departments ranked in the top fifteen if not the top ten. Our engineering college graduates the largest number of engineers in the nation and ranks second only to MIT in the amount of research activity.

But we are known for more than this, including top ranked computing and telecommunications programs, innovative biological and chemical science programs that investigate chem/bio agents, a Center for Information Security that addresses both technical and policy matters, our number one ranked program in logistics that deals with all of the challenges deriving from the nation's complex transportation networks, and the Georgia Tech Research Institute, famed for its defense research but increasingly taking a larger role in law enforcement, emergency preparedness, and homeland security. So I think you choose a good place for this conference. We look forward to working with you to learn more about this important topic and seeking ways in which we can aid in the effort to improve homeland security.

I have a personal interest in this topic through two activities I am involved in. First, I am privileged to serve on President Bush's Council of Science and Technology Advisors where I am a member of the panel on combating terrorism. We are interested in providing sound advice to the President on this important topic. Second, I am fortunate to be a member of the Task Force on "Security in an Information Age" that is sponsored by the Markle Foundation. This summer we met for three days in Colorado to discuss the IT infrastructure needed for the federal government in the future to deal with terrorism. The report was just released and we are going to provide each of you with a copy. It was at this meeting I had the pleasure of meeting with Steve Cooper, and learning what a big job he has and that he is well equipped to do it. Steve is the head of the IT efforts for homeland security and reports to both Governor Ridge and President Bush. We are pleased to join with his staff in co-sponsoring this event.

As the Markle Foundation Task Force has wrestled with the issue of national security in an information age, it has become clear that the way we obtain and use information is the key to maintaining a free society that is also a secure society. The report that the task force just issued this month says, "Information analysis is the brain of homeland security." If that is true, then a good communications network is the nervous system – capable of instantly relaying critical information back and forth and stimulating appropriate action at the appropriate place.

What we call "homeland security" really depends on "hometown security." We can have federal homeland security offices, laws and policies, but the actual response to terrorist attacks and security breaches is a local endeavor. On September 11th, it was the local police, firefighters and emergency medical technicians who responded to the alarms in New York, Washington, and Pennsylvania. It was local governments and authorities that secured the nation's airports at the behest of the federal government. The flow of information and the reliability of information are critical if people at the state and community level are to be alert to the threat of terrorist activity and either thwart it or respond immediately and effectively.

The Markle task force concluded that the communications system that will best serve our homeland security interests is not a centralized mainframe architecture based in Washington, D.C., but a decentralized, networked system that can "defeat the challenge of decentralized, sometimes networked adversaries." In thinking about this decentralized, networked system, the task force envisions a system that empowers and coordinates local participants, enabling the system to be flexible, nimble and responsive. That is why we are here – to explore best practices and case studies that will help us to build the decentralized, networked system we need for homeland security communications to be timely and effective.

Georgia Tech is a leader in this region and in the nation in developing the communications technology we need for efficient information sharing. We were honored to have President George W. Bush and Homeland Security Director Tom Ridge on campus last March for an emergency response demonstration coordinated by Tom Bevan and the Center for Emergency Technology, Instruction and Policy, which we call CERTIP. As the President looked on, more than 100 Georgia Tech personnel and first responders from the Atlanta community staged an emergency response to a mock release of poisonous gas. That demonstration involved three communications technologies developed at Georgia Tech to allow firefighters, police, and public health officials to understand the biological and chemical weapons they are facing, track their movement, and communicate among themselves as well as with experts who are not on the scene.

In the system demonstrated for the President, first responders carry personal digital devices – PDAs – that contained a software application called Decision Aid, which was developed here at Georgia Tech. Decision Aid helps first responders determine the hazardous agents to which victims might have been exposed by prompting them to gather a checklist of symptoms and other patient information. The software then lists the possible agents that cause those symptoms and provides instructions for treating victims and decontaminating the site.

A wireless local area network relays the information about victims' symptoms from the first responders' PDAs to the Medical Reachback System. The Medical Reachback System consists two suitcases full of communications and medical equipment, and it uses the Internet to connect the site with medical experts in other parts of the nation who can diagnose and prescribe treatment for the victims.

Finally, the wireless local area network also connects the first responders' PDAs to a laptop computer containing the Situation Awareness Geographic Information System. This specialized computer program tracks the location of both people and biological or chemical agents. It can also provide information to responders such as building blueprints and projections of where air currents will carry poisonous gases.

Together, these technologies are designed to coordinate the efforts of first responders and get them the information they need to make the best possible response to an act of terrorism. However, this system is focused on the needs of first responders and victims at a particular local disaster site. It represents only one piece of the information-sharing picture that is needed to keep our homeland secure, and only one aspect of our work here at Georgia Tech. Tom Bevan draws on resources from all across the Georgia Tech campus in coordinating our contribution to homeland security.

Georgia Tech is one of only two major research universities that devote an entire college to computing, and our College of Computing is one of the nation's largest and most highly regarded programs. The dean of the college, Rich DeMillo, was the first Chief Technology Office for computer giant Hewlett Packard before coming to Georgia Tech. He is a leader in national information technology policy

One of several research centers in the College of Computing is the Georgia Tech Information Security Center, which conducts research that will contribute to the development and testing of systems, devices, strategies, policies and practical ideas that promote information security. We also offer an interdisciplinary master's degree

program in information security that combines the resources of the College of Computing and the Sam Nunn School of International Affairs.

Georgia Tech is the home base for the Georgia Centers for Advanced Telecommunications Technology, which is a real and virtual cluster of centers of excellence in advanced communications technology. In addition to conducting a significant volume of leading edge research, especially in wireless environments, GCATT also works on commercializing new technology and has an office of technology policy. The policy issues it addresses include infrastructure and information security, as well as access, competition, and privacy.

In addition to a tremendous amount of research in information and communications technology, we are also the national leader in logistics. And our faculty includes experts in transportation security whose advice is sought by policy makers in Washington. Why should we be interested in logistics? Well, Georgia is one of the nation's keys to movement of people and goods. Atlanta is home to the world's busiest airport. Shut it down and the nation's economy is irreparably damaged. We are a major railroad hub, dating all the way back to the days when Atlanta was called Terminus. We also stand astride the merging of three of the nation's busiest freeways. Added to this mix is the dynamic Port of Savannah, and its rapidly growing activity. Georgia Tech is ramping up its activities with the Port through our growing new engineering campus that we are building in Savannah. But across the entire spectrum, we have experts doing research on all of these elements and how they fit together, as well as studying what the vulnerabilities are and what happens if one is choked off.

So you can see why we believe Georgia Tech has a contribution to make to the nation in fostering homeland security, and why we want to be a participant with you in bringing our technological expertise to bear on behalf of this region and the nation. Again, we are pleased to have you on our campus and excited about the opportunity to host this forum to gather and catalog best practices in information sharing. And without further ado I am going to turn the program over to Steve Cooper to get that process underway.