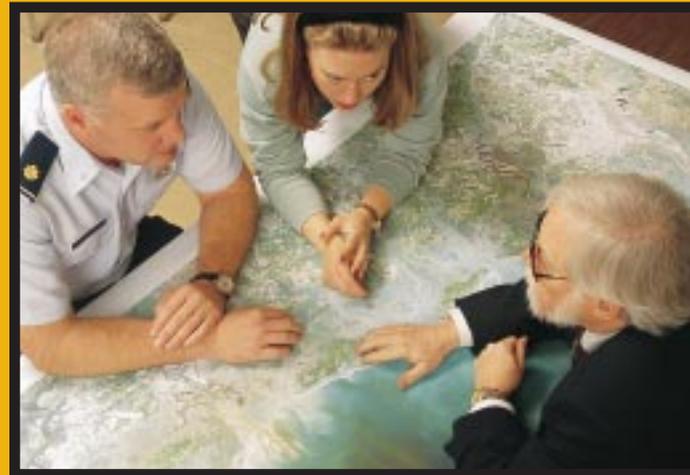
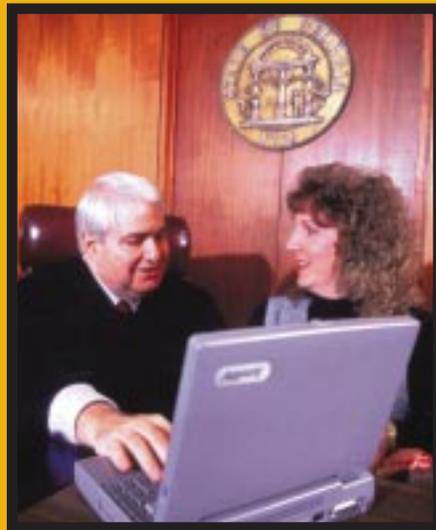
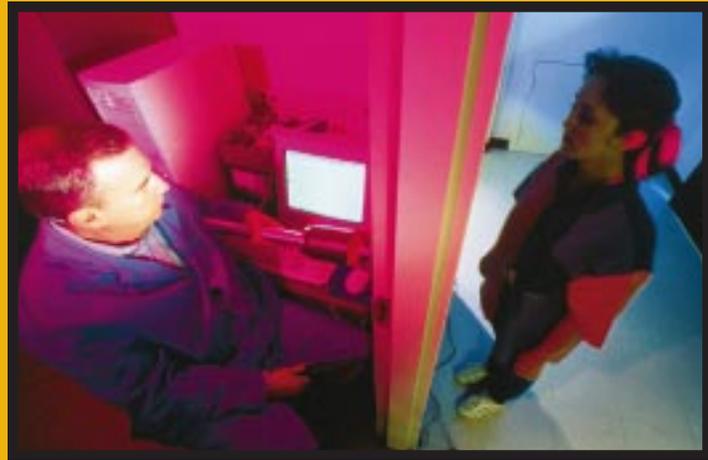


Law Enforcement Technologies



Criminals are becoming more sophisticated; prison populations are growing; new weapons of mass destruction are being developed; and drug trafficking is on the rise.

As the challenges of law enforcement become increasingly complex, so do the needs of law enforcement personnel.

Combating crime and ensuring public safety today require new capabilities and strategies.

The Georgia Tech Research Institute (GTRI) offers the expertise, technology and resources to meet the law enforcement challenges of the new century. Our research staff can help your organization, too.

CHOOSING GTRI

GTRI is the nonprofit, applied research arm of the Georgia Institute of Technology. We conduct more than \$100 million in scientific, engineering, computer technology and related research each year. Our facilities include state-of-the-art laboratories in electronics, computer science technology, and materials and physical sciences.

GTRI also boasts an impressive and diverse staff. Our

researchers have expertise in a wide variety of law enforcement technologies; more than 80 percent of our researchers have advanced degrees. In addition to our in-house staff, GTRI has access to a wide range of experts on the Georgia Tech campus. GTRI also is able to draw on a multitude of external contacts.

GTRI can provide an objective evaluation of your organization's most pressing problems and help you find efficient, cost-effective solutions. Let GTRI put law enforcement technology to work for you.

WHAT WE'VE DONE FOR OTHERS

- GTRI is helping Georgia's court system extend its capabilities via information technology. The courts automation program is providing state, superior and juvenile courts with a management information system of case-related data that is user friendly, real-time, integrated and secure. The Probate Court On-Line System is a web-based application used for decedent estate management and guardianship functions. The Protective Order Registry provides a statewide index of active protective orders accessible by law enforcement officers and the judiciary. The State of Georgia's Case Plan Reporting system is a



GTRI researchers use a Cray supercomputer and other machines to explore solutions to information security challenges.

web-enabled database application that tracks the progress of a child's civil abuse and neglect case through the Division of Family and Children Services and the juvenile court.

- Both industry and government are being served by the efforts of Georgia Tech's Information Security Center. Dedicated to research on the challenges of protecting computer-based information, the center is working on projects related to security in intrusion detection, public key infrastructure, Asynchronous Transfer Mode networks, active networking environments, broadband networks, Internet II and telecommuting applications.

- The development of a prototype RADAR flashlight will one day benefit police officers and corrections personnel. The device can detect a human's presence through walls and doors using radar and a specialized signal processor that detects body movement generated by respiration. The Georgia-Tech funded project also might be useful for locating survivors in the rubble of earthquakes or accidents.

- GTRI researchers are supporting the National Guard Bureau's Counterdrug Directorate in its ongoing war against drugs. The project combines the innovative use of geographic information systems, digital mapping, enhanced visualization, virtual reality, electro-optics, sensor fusion, and modeling and simulation.

- The National Institute of Justice and the Defense Information Systems Agency are more effectively fighting drug trafficking with help from GTRI researchers. The Southwest Border States Anti-Drug Information System facilitates the rapid, secure sharing of sensitive information between law enforcement agencies, including those with dissimilar databases.

- GTRI engineers have developed a new technology for the Georgia Department of Transportation for counting the number of occupants in vehicles passing by at highway speeds. The project consists of a computer-assisted infrared imaging system and will help assess the results of efforts to reduce air pollution.

- Georgia Tech researchers have helped develop a revolutionary environmental monitoring and analysis system that increases the efficiency and effectiveness of contaminant analysis. Using integrated optic chemical sensors and data management hardware and software, the patented system reduces environmental monitoring costs, while decreasing health and safety risks and ensuring environmental compliance.



With critical data available at their fingertips via a TCP/IP network, Georgia state, superior and juvenile court officials can access data anywhere they have Internet access.



Determining whether vehicle occupancy is increasing -- and whether that is related to changes in air pollution -- will be easier using data collected by an infrared roadside camera GTRI researchers are developing.

- Law enforcement professionals in government and industry are able to take advantage of information-sharing workshops sponsored by GTRI and the National Law Enforcement and Corrections Technology Center-Southeast. The workshops focus on emerging information technology, including a national crime database, data transmission, mobile computing, data security and other pertinent issues.

APPLIED RESEARCH AND CAPABILITIES

- Information and communication technology
- Sensor technology
- Electro-optics/Integrated optics
- Information security
- Hazardous waste technology
- Geographic information systems technology
- Dopplar radar technology
- Infrared technology
- Systems integration
- Signal processing/Image processing technology
- Modeling and simulation

WHAT GTRI CAN DO FOR YOU

- Help organizations adopt the best new technologies for their needs.
- Provide experts in multidisciplinary fields to solve law enforcement problems.
- Apply years of comprehensive experience to reach a common goal.
- Promote integration of new technologies into existing domains.
- Bring advanced technology to the field at a low cost.
- Provide comprehensive and objective solutions to law enforcement issues.

On the cover, clockwise from top left:

1. The Protective Order Registry provides a statewide index of active protective orders accessible by law enforcement officers and the judiciary.
2. Despite barriers such as walls, the RADAR flashlight can discern the presence of another human being.
3. Our researchers combine tools including LANDSAT images, mapping and advanced Geographic Information Systems visualization to help the National Guard on the CD-GRASS project.
4. A judge examines data on a laptop connected to a court information system developed by GTRI.



The E-SMART environmental monitoring and analysis system measures low levels of contaminants on site in real time.

CONTACT INFORMATION

To learn more about what GTRI can do for your organization in law enforcement and public safety, visit us on the web at <http://www.gtri.gatech.edu/lawenf.htm>. Or, contact:

Lisa C. Sills
 Information Technology and Telecommunications
 Laboratory
 Georgia Tech Research Institute
 Atlanta, GA 30332-0832
 (404) 894-8957, office phone
 (404) 894-9081, fax
lisa.sills@gtri.gatech.edu, e-mail

Tom Horton
 Business Development Office
 Georgia Tech Research Institute
 Atlanta, GA 30332-0801
 (404) 894-0239, office phone
 (404) 894-4316, fax
tom.horton@gtri.gatech.edu, e-mail