

GTRI Insider

A NEWSLETTER FROM THE GEORGIA TECH RESEARCH INSTITUTE

SUMMER 2008

Getting to Problem. Solved.

by Kirk Englehardt, GTRI Director of Communications (kirk.Englehardt@gtri.gatech.edu)

So tell me...what does GTRI do?
It's a question we've all been asked, and while it seems simple – it has always been the most difficult question to answer.

In mid-2007 GTRI began a process of exploration intended to help us clearly define what we do as an organization, and who we do it for.

From the beginning it was obvious that the telling of the GTRI story was complex, challenging, diffused, and inconsistent. What was being told internally often varied greatly from what was being told externally with current and prospective sponsors and stakeholders. GTRI's story was potentially very strong—with innovative solutions and positive, sometimes unexpected and amazing outcomes—yet it lacked clarity, focus, consistency, resonance...and differentiation from our competitors.

The list of problems was growing: How could GTRI grow its business among non-governmental and commercial entities? How could the depth of expertise in government and related work be parlayed into research for industry? And how could GTRI hope to earn a greater piece of the philanthropic donor "pie"?

Our objectives quickly became imperatives. In short, we needed to develop and deploy new messaging that would clearly: (1) convey the value behind the research being done at GTRI for government as well as industry/commercial and philanthropic sponsors; (2) articulate what the organization does and how it is different from its top competitors; (3) resonate with existing and new sponsors and stakeholders in a way

that will support GTRI's growth and development initiatives for years to come; and (4) complement and support the synergy between GTRI and Georgia Tech.

To discover GTRI's unique positioning, GTRI and Arketi Group, an Atlanta-based technology marketing firm, began with a series of formal focus group sessions to determine what GTRI researchers believed truly differentiates GTRI from its competitors. The program also included:

- **Competitive Research:** The first step of the research was to perform an industry analysis of competitive messaging to understand the various messages and claims being made and used by other research organizations. Then, GTRI's key attributes (thought to be potential differentiators) were reviewed against the competition.
- **Positioning Research (e-Survey, Internal & External):** The second step included a quantitative, Internet-based, survey among GTRI stakeholders (i.e., current/prospective clients, GTRI research faculty and leadership, GT colleagues, etc.). The objective was to determine the key drivers (benefits and attributes) behind outsourcing R&D to an organization like GTRI.
- **Positioning:** All of the information gathered was used to build an initial positioning platform for GTRI. The platform defined our target audiences and identified what factors influence their R&D decisions. It also highlighted the unique opportunities GTRI had to position itself as a leader in a number of different "research" categories (defense & security, energy & environment, manufacturing technologies, health & human systems and manufacturing technologies). Finally, it helped us determine the compelling benefits GTRI provides to its stakeholders and the key differentiators that separate GTRI from its competition.
- **Concept Development:** Using the research-based positioning statement, several high-level concepts (themes) were developed to reflect how the positioning could be taken to market. These included the key concepts, along with taglines, for "Problem Solvers" and "Expertise".

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L to R: Young, Cross

Institute alumnus John Young Jr., undersecretary of Defense for Acquisition, Technology and Logistics in the Department of Defense, addressed the Tech community about the importance of scientists' and engineers' participation in the public policy arena. A key person behind the military's Mine Resistant Ambush Protected vehicles (MRAP) in use in Iraq, Young said, "There is nothing more satisfying than helping the people of the United States." He also received a presidential citation from President G. Wayne Clough, recognizing his accomplishments after completing his undergraduate engineering degree at Tech.

SNIPPET O'WISDOM:

The real art of conversation is not only to say the right thing at the right time, but also to leave unsaid the wrong thing at the tempting moment.



The *GTRI Insider* is a publication created for employees and friends of the Georgia Tech Research Institute. It is produced by the GTRI Communications Office, with additional content provided by GTRI departments and labs. We welcome your comments and suggestions. If you have information or story ideas you would like to submit for consideration, please complete the form on the back cover of this newsletter or e-mail your submission to the GTRI Communications Office at CommInfo@gtri.gatech.edu

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Driving Success at GTRI

We are in the midst of NASCAR season and it seems that GTRI is hitting on all cylinders. Our awards for sponsored research are at an all time high. More importantly, the impact of our work is soaring to new heights as well. This is made possible not just because of the "driver" (research faculty on any given project), but also the "pit crew" (lab management, support staff, dare I say even the "2nd floor" staff). In this issue of the *GTRI Insider*, we share a few examples of "hitting on all cylinders" and some of the heroes of our "pit crew."

In February we celebrated the 30th anniversary of GTRI's presence in Huntsville. Georgia Tech President Wayne Clough traveled to Huntsville to celebrate with us and gave a marvelous talk about the importance of the Huntsville Research Laboratory and the work of GT in the Huntsville community. This was a remarkable event because over 200 GT alumni and friends came out to celebrate. The turnout was the largest ever for the local alumni association and truly amazed our colleagues from the Georgia Tech Development Office and the Georgia Tech Alumni Association.

Terry Tibbitts became the ELSYS Laboratory Director on 1 Sep. Shortly after, ELSYS set all time records for research awards. Terry would be the first to tell you that the awards records were years in the making by the dedicated ELSYS staff. But I can tell you from my personal interactions with Terry that his unswerving dedication to improving our project director capabilities has had a direct impact on the improvements seen in his lab's award growth. Terry is the chief of the "ELSYS pit crew."

Also a key member of the GTRI "racing team" is Lon Pringle, who was recently appointed as STL Laboratory Director. Formerly STL's chief scientist, Lon brings more than 20 years of GTRI experience to his new role and he has a clear sense of enthusiasm about the lab's work. I know it won't be long before he and STL start winning some big races!

A number of GTRI's key strategic goals are related to finances. The others are related to technical excellence, our people, and our environment. Shortly after becoming the GTRI Deputy Director and Director of Research, Tom McDermott advocated that we create a Financial Operations Department that combines our rate management and budgeting functions. Rebecca Caravati now heads up this group and is ably supported by Dennis Crain and Maria McGaha. We are in the midst of some truly transformational improvements in how we do "one GTRI" budgeting and financial management.

There are more stories in this issue that describe other work in support of GTRI by more of our "pit crew" heroes, as well as a brief survey of some of GTRI's recent leading edge technical work.

Start your engines! I'll be in the pit trying to help out as needed. See you when GTRI is waved in with the first checkered flag!



Dr. Stephen E. Cross
Vice President, Georgia Tech
Director, GTRI

GTRI New WEB

The Georgia Tech Research Institute is proud to announce the launch of the brand new GTRI Web site. After months of research, strategy, design and development, this site allows GTRI to provide targeted information to customers and prospects.

The site offers deepened value that nurtures business relationships and growth. Prominent government and industry links provide fast, easy access to specific industry and solution information. Laboratories, field offices, centers and research facilities have dedicated content areas so visitors can learn about and contact the GTRI experts who match their interests.

Additionally, you will find:

- Expert to Expert - GTRI experts share their perspectives
- Newsroom - packed with the latest GTRI news and case studies
- Plan A Visit - quick and easy way to get information about a specific GTRI location
- Social Media - visitors can subscribe to our RSS feeds to stay up-to-date on the latest GTRI news or link to our content via social bookmarks like Digg or Reddit
- Quicklinks - relevant information linked on each page

The new site lets visitors easily interact with us and learn how we can help solve their toughest problems. It makes it easy for visitors to take the next step and partner with us. Get ready for a new era of business relationships!

Check it out today at <http://www.gtri.gatech.edu>



UP CLOSE AND PERSONAL WITH...

Angela Cantor

NICKNAME OR CALL-ME? :

Angela

WORKING FOR DEPARTMENT/LAB:

ESD (Enterprise System Division)

WORK LOCATION:

430 South Bldg

GTRI EMPLOYEE SINCE:

February 19th, 2008

IF YOU WERE A SUPERHERO, WHICH ONE ARE YOU?:

Jayna of the Wondertwins.

MOST PROFOUND WORK EXPERIENCE:

Working 36 hours straight in preparation for a disaster recovery test.

WHAT WERE THE LAST TWO MUSIC CDS YOU PURCHASED?

The Past Has Been Bottled (Glenn Tilbrook) and Raising Sand (Robert Plant and Alison Krauss)

WHAT SITCOM THEME SONG BEST DESCRIBES YOU?

Theme from That 70s Show

IF I WERE ANYWHERE ELSE IN THE WORLD, DOING WHATEVER I WANTED... I WOULD BE WHERE DOING WHAT?

Sitting on a beach reading a stack of novels

HAS THERE EVER BEEN A MOVIE, BOOK, OR T.V. SHOW THAT CHANGED YOUR LIFE?

The Stand by Stephen King

THE MOMENT YOU KNEW YOU WERE A GROWN-UP:

When I had to get my own car insurance

THE WORST THING THAT TURNED INTO THE BEST THING THAT EVER HAPPENED TO YOU:

I was attacked by a dog while running, but the settlement was enough for a down payment on my first home

IF YOU HAD TO EAT ONE FOOD FOR A WEEK, WHAT WOULD IT BE?

Haleem (a spicy Bangladeshi soup)

WHAT'S YOUR GUILTY PLEASURE?

Chocolate

ALL TIME FAVORITE TOP THREE MOVIES?

Monty Python and the Holy Grail, Raising Arizona, Donnie Darko

I'D NEVER BE CAUGHT WITHOUT MY...?

XM radio

IF YOU COULD HAVE LUNCH WITH ANYONE (DEAD, LIVING, FICTIONAL) WHO WOULD IT BE AND WHY?

Jack Bauer from 24 — Lunch would most likely be cut short due to some national crisis or terror attack, but it would be interesting

A FOND MEMORY FROM BEING A KID:

Playing in a treehouse my dad built

ARE YOU A ROLLER-COASTER OR MERRY-GO-ROUND PERSON?

Roller coaster

SOMETHING YOU PROBABLY DIDN'T KNOW ABOUT ME:

I was a DJ at my college radio station

MY SILLIEST PET PEEVE OR PHOBIA:

Seeing "it's" misspelled as "its" or vice versa

BEST THING YOU LIKE ABOUT YOURSELF:

I'm inquisitive

THREE WORDS THAT DESCRIBE ME BEST:

Big NASCAR fan



IS WHERE YOU'RE AT NOW (IN YOUR CAREER) WHERE YOU PLANNED OR DIDN'T PLAN?

Where I planned, mostly

RECENT BOOK READ:

Darkly Dreaming Dexter by Jeff Lindsay

WHAT I LIKE MOST ABOUT MY JOB.

It's never dull.

IF I WON THE LOTTERY, I WOULD:

Travel anywhere & everywhere

If you'd like to nominate a colleague to be featured in the next 'Up Close and Personal With...' please see the form on the back of this issue of the *GTRI Insider*.

GTRI Honors Huntsville Research Laboratory's 30 Years of Service

GTRI's Huntsville Research Laboratory (HRL) has celebrated a major anniversary. HRL became official 30 years ago – in February 1978 – when Georgia Tech research faculty began establishing an on-site presence at Redstone Arsenal in Huntsville, Ala., to support U.S. Army missile technology.

Since its modest beginning as “Huntsville Operations,” the laboratory's impact has grown, branching out into a variety of defense fields. Moreover, its location on a key Army installation has helped enhance communication between its parent organization, the Georgia Tech Research Institute (GTRI), and its military stakeholders.

“Our Huntsville Research Laboratory is an extremely important part of our overall strategy,” says Stephen E. Cross, GTRI's director and a Georgia Institute of Technology vice president. “It has delivered outstanding technical assistance and real innovation on a consistent basis, which is reflected in the positive feedback we get from our stakeholders.”

HRL's milestone was celebrated at a Feb. 26 Huntsville event that drew some 200 attendees, including Georgia Tech officials, researchers and alumni, and representatives from the Army and other U.S. military branches.

Georgia Tech President G. Wayne Clough presented a GTRI award to William McCorkle, executive director of the Army Aviation and Missile Research, Development, and Engineering Center (AMRDEC) and an early proponent of a permanent GTRI presence in Huntsville. McCorkle is the first recipient of the GTRI Award for Exceptional Innovation and Leadership.

In making the award, Clough remarked on McCorkle's many achievements in Army rocket and missile technology and praised him for his vision.

“What we are celebrating today is Dr. McCorkle's bold solution – to bring in Georgia Tech to Huntsville and established the permanent presence of GTRI engineers at Redstone Arsenal,” Clough said.

Today, HRL focuses on software engineering and system engineering for a variety of U.S. Department of Defense programs, says Barry Bullard, the lab's director. HRL's biggest customers include the Army Aviation and Missile Research, Development, and Engineering Center (AMRDEC); the Army Aviation and Missile Command (AMCOM);



GT President Wayne Clough presented a GTRI award to William McCorkle, with Steve Cross looking on.

the Security Assistance Management Directorate (SAMD); the Army Space and Missile Defense Command (SMDC); the Army Program Executive Office Missiles and Space; the Army Program Executive Office Aviation; and the Department of Defense Missile Defense Agency.

These agencies keep HRL busy with research that covers air defense systems modeling, software testing and evaluation, war-game simulations and analysis, and weapons system modernization. The lab's current work includes hardware/software-in-the-loop (H/SWIL) systems engineering and analysis of the Patriot air and missile defense system, as well as ongoing modernization of the Hawk air defense system, a legacy system still used by numerous U.S. allies.

“In our 30 years here, we've had the opportunity to work with the Army on its missile defense mission as well as grow our sponsor relationships into other areas,” says Bullard, HRL Director since 1998. “Our expansion into the aviation mission area and several forms of system engineering is keeping our staff of 33 very busy.”

William Craig leads AMRDEC's Software Engineering Directorate, HRL's biggest customer. Craig calls GTRI's Huntsville Lab “certainly one of the better contractors we have... You have unique

expertise and very capable people, and you have given us valuable expertise in a number of areas.”

AMRDEC Executive Director McCorkle has been at Redstone Arsenal for nearly 50 years. He, too, expresses long-term satisfaction with the Huntsville Lab's work.

“It's certainly true that we're happy with GTRI's work,” McCorkle says. “Over the years, it's been a very good thing for both us and for Georgia Tech... You have done important technical work on the Hawk system and assisted us in the air-defense arena, and that's been a good arrangement.”

McCorkle adds that he visited GTRI recently and was impressed by a new Georgia Tech application of surface response methodology. “It's a very interesting new application in which Georgia Tech is the leader,” he said.

Richard Stanley, HRL's first full-time director (1984-1998) and now director emeritus, recalls that McCorkle was indeed a major factor in bringing Georgia Tech to Huntsville.

“In the 1970s when GTRI was still known as the Engineering Experiment Station (EES),” Stanley relates, “its personnel would often travel from the main campus in Atlanta to Huntsville to support Army technology.”

“During that period, World War II-era Army



engineers were retiring in large numbers, and Redstone Arsenal needed additional technical support,” Stanley says. “McCorkle considered the issue and came up with the idea of a permanent Georgia Tech presence in Huntsville.”

Bob Shackleford, director of what was then GTRI’s Electromagnetics Laboratory, worked with McCorkle’s senior staff to make the proposal a reality. By early 1979, six Georgia Tech research faculty and co-op students had settled into government offices at Redstone Arsenal.

“It gave Tech instant accessibility to the government sponsors who were in need of expertise,” says Stanley.

Larry Schaefer, who has been serving as an HRL research engineer for nearly 29 years, remembers those early days. He recalls that the new Georgia Tech lab already felt stable and established when he joined in June 1979 as a new Purdue University physics graduate. He also remembers that the government-supplied office space was pretty basic.

But Schaefer was highly impressed by the research taking place at Redstone. He was soon working in the Army’s Radio Frequency System Simulation building in Huntsville, which he describes as being truly state-of-the-art.

“A place like that was impressive,” Schaefer says. “I was impressed not only by the technology that we were developing but also by what we were doing for the country.”

Among other things, Huntsville Operations helped bring Georgia Tech to the daily attention of the Army. Stanley – who in 1979 was a Redstone-based Army officer with little knowledge of Georgia Tech – says the Huntsville office helped introduce him to Tech’s capabilities. So did his acquaintance with George Ewell, an EES principal research engineer who served with Stanley on a Department of Defense blue-ribbon defense panel.

“In getting to know George, my knowledge and respect for Georgia Tech grew significantly,” Stanley says. “And so some years later, when a stranger named Bob Shackleford called me about becoming director of the Huntsville office, he had my full attention.”

When Stanley took over as the Huntsville lab director in March 1984, the staff there was already expanding rapidly.

“We had the full spectrum of research faculty titles over here, as well as a large number of co-op students,” he recalls. “That helped us broaden the scope of our research.”

HRL has also worked closely with other GTRI labs and has helped establish new research collaborations for them. In this way, HRL has acted as a kind of GTRI liaison in Huntsville, as well as a research facility in its own right.

“Huntsville Research Laboratory was a factor in GTRI’s becoming an University Affiliated Research Center (UARC) in 1995,” Stanley recalls. “GTRI’s accomplishments at Redstone Arsenal added to Georgia Tech’s reputation within the Department of Defense.”

Another significant role played by Georgia Tech in Huntsville is that of what Stanley calls “an honest broker.”

“By utilizing GTRI, the Army was bringing in someone who was not part of industry or part of a governmental agency,” Stanley says. “We could sit in between the various parties and give an objective, informed opinion about what would work and what would not.”

Says Bullard: “The first 30 years, productive as they have been, may be only the beginning, and we look forward to growing in Huntsville and assisting the nation with its future science and technology defense needs.”

The New GTRI Annual Report is here!

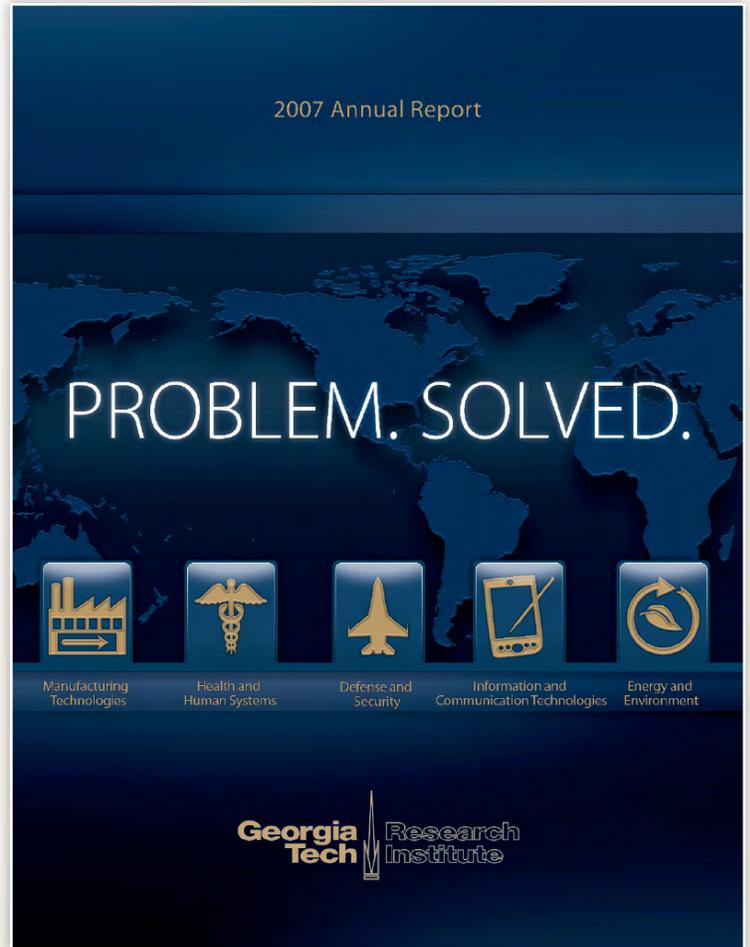
The Annual Report includes revamped corporate messaging consistent with GTRI's new website. The 60-page report also features more research stories and more GTRI information than ever before!

The Communications Office launched the publication with a Coffee Bar and Krispy Kreme doughnuts on campus – and a Papa John's Pizza Extravaganza at Cobb County. Over 300 attended the parties and gave their on-site feedback – thumbs up!

Uses for the Annual Report:

- Display in your reception areas
- Provide copies in visitor packages for potential sponsors (along with other marketing info such as Project sheets or GTRI brochures – we have folders that complement)

If you require additional single or bulk copies contact the Communications department at GTRIinsider@gtri.gatech.edu



MYSTERY HISTORY



Help us to identify a photo from the GTRI archives. Do you know the person or project depicted?... Or, if you want to have some fun, make up a caption! Send to GTRIinsider@gtri.gatech.edu To view the previous Mystery History photos and caption guesses/ suggestions see WebWISE <https://webwise.gtri.gatech.edu/comm/gtri-insider>

GTRI Veteran Terry Tibbitts Named ELSYS Director

Terry Tibbitts' resume contains only one line under employment history -- "Georgia Tech Research Institute, 1979-present."

As the recently appointed director of GTRI's Electronic Systems Laboratory (ELSYS), he brings to his new job nearly three decades of experience in that laboratory's research, along with an abiding faith in its business approaches.

"ELSYS has seen great leadership in the lab director position in our recent past," said Tibbitts, pointing to former leaders such as Bill Rogers, now retired, and Tom McDermott, currently GTRI's Deputy Director, and Director of Research.

"That kind of leadership has helped us achieve steady growth in the last decade, so that today our three divisions are doing about \$25 million in research annually," he said. "So I don't plan to make significant changes to either our business model or management style."

Tibbitts, who became ELSYS director in September, received undergraduate and graduate electrical engineering degrees from Georgia Tech in the 1970s. During his last quarter in school, he became a co-op student at the Engineering Experiment Station -- GTRI's earlier name -- and, he recalls, "I really liked what I saw."

Since then, Tibbitts has spent more than 28 years conducting and managing research into the use of embedded computers in military avionics, particularly in ELSYS' specialty areas of radar warning receivers and electronic warfare (EW). Today his titles include Principal Research Engineer as well as GTRI Fellow.

ELSYS, the largest lab in GTRI with 140 research-titled professionals and 100 support personnel, has roots that extend deep into GTRI's history, Tibbitts explains. It began life as the

Systems Engineering Laboratory (SEL) in Engineering Experiment Station days, and it became ELSYS during a major GTRI reorganization during the late 1980s.

Work on radar warning receivers (RWR) -- systems that alert military pilots of hostile enemy moves -- has been a big part of the ELSYS story. SEL's first RWR contract consisted of a small 1980 study to do an upgrade to the ALR 46, a defensive system used on the B-52 aircraft.

"That work ultimately resulted in the fielding of about 5,000 modification kits in 1982," Tibbitts said. "We've grown from that single contract to about \$10 million a year specifically in radar warning receivers, and we've spun that into other sidelines that generate another \$10 million or so, primarily in EW integration and software support."

Today, many U.S. and allied aircraft are protected by RWRs that contain software and hardware modifications designed by GTRI, including the F-16, A-10, C-130, and MH-53J aircraft.

Perhaps not surprisingly, Tibbitts is involved in aviation in his non-working hours as well. He's the joint owner -- along with ELSYS employee Jack Hart -- of a single-engine Piper Cherokee airplane. ELSYS' new director is also a licensed airframe and power plant mechanic and is currently building a VANS RV-9A two-seat experimental aircraft that he plans to fly over the Grand Canyon in 2010.

He is married to the former Sheila Weber of Blairsville; the Tibbitts split their time between residences in Dallas, Ga. and Blairsville.

Tibbitts foresees 10 percent growth this year among the three ELSYS divisions -- System Evaluation, System Engineering and Human Systems Integration -- as well as ELSYS participation in



several GTRI program offices located throughout the country.

The ELSYS business model, Tibbitts said, is based on keeping current customers satisfied, especially traditional DoD customers, and that won't change. Still, the lab is also growing business around the edges in thrust areas that include human systems engineering; research into Command, Control, Communications, Computers and Intelligence (C4I), and a GTRI initiative to develop a professional master's degree in systems engineering.

The ELSYS policy of gradual expansion is somewhat like "establishing a beachhead and then expanding from that beachhead into the future," Tibbitts said.

And, he adds, "our outlook for that future is very bright."

The New Enterprise Systems Division

In January, the Enterprise Systems Division (ESD) became a separate unit that reports directly to Lisa Sills, Deputy Director of Support Operations.

ESD has fielded several applications over the past few years that are essential to GTRI as well as campus and OSP. The new WebWISE was just released, and the unit is scheduled to update several legacy systems in

2008. ESD Director Raj Vuchatu and his team are highly regarded by GTRI and OIT leadership for their professionalism and dedication. Becoming their own department gives them the recognition for their hard work at the GTRI and campus level. See more info on their department here: <https://newwebwise.gtri.gatech.edu/esd>

New Director Of Financial Operations

As GTRI grows, its units must stretch to accommodate the organization. A new unit (in DO) called **Financial Operations** was created by combining the existing functions of Rate Management and Budget. The head of the combined units is Rebecca Caravati (Director of Financial Operations). The new unit will report to the Deputy Director and Director of Research (Tom McDermott).

In her new role, Rebecca has responsibility for supervision of GTRI budget and finance personnel (Dennis Crain and Maria McGaha), analysis of GTRI financial performance and presentation at monthly GTRI Leadership Council meetings, management of all GTRI financial policies and procedures, development of GTRI financial strategy and recommendation of budget and policy changes to the VP/Director and Deputy Director, and lead for all government financial audits. Congratulations Rebecca!



Training Opportunities

These courses are free to all GTRI employees. Register at this link: <https://webwise.gtri.gatech.edu/pdcourse/signup.php>

Career Development

July 16, 23, 30
CRB 238 8:30-12:30

GTRI in conjunction with the Office of Organizational Development is offering a career development program that includes resources to support retention and career management for employees at all levels.

Risk Management

September 17
CRB 238 8:30-12:30

Introduces GTRI employees to the principles of Risk Management as a discipline that should be applied to all GTRI projects. The course will demonstrate a simple way to anticipate and be prepared for risks when they do occur, and also offer cost effective ways to cope with issues that affect all GTRI projects.

Industrial Contracting

October 8
CRB 238 8:30-1:30 Includes a working lunch.

Discover proven strategies used to obtain private industry contracts and examine the rewards, restraints, research management requirements, as well as other issues. The course will feature updates on recent changes in industry contracting procedures and provide an opportunity to meet personnel in the Industry Contracting Office.

Designed for GTRI research faculty.

Participants Needed to Evaluate Everyday Products

The Georgia Tech Research Institute (GTRI) serves as the national test lab for the Arthritis Foundation's Ease of Use Commendation Program. In order for a new product to be considered for the program the Arthritis Foundation requires that the product be evaluated by an independent test lab. GTRI is currently recruiting participants that have arthritis for product evaluations to be conducted on the Georgia Tech campus.

The evaluation process includes a discussion of product being tested, strength measurements (such as identifying the force needed to rotate a bottle cap) and product use assessment.

The results are sent to the product manufacturer so design improvements can be made if they are needed. The reports are also sent to the Arthritis Foundation to determine if the product is suitable for the Ease of Use Commendation.

We test a wide variety of consumer products that are commonly found in the home or office. Each evaluation will take about an hour to complete. Participants will be paid \$30 per hour for their participation.

If you, or someone you know, have arthritis and would like to participate in a product evaluation at Georgia Tech please contact Liz Weldon at



404-407-8438 or email her at elizabeth.weldon@gtri.gatech.edu. GTRI tries to match the products we test to the interests and the abilities of our participants. Adding your name to the participant list does not represent any obligation on your part.

GTRI LEARNING AND GROWTH PROGRAM

GTRI's Learning and Growth program, which provides opportunities for research faculty members to participate in both individual and group research initiatives, is now in its fifth successful year. The individual program awards up to 24 hours of time to participating researchers. The recipient can either charge hours to do research or any other effort to complete their learning activity. The awarded number of hours can also be translated into a dollar equivalent which can be used for travel, conference and training registrations, and to purchase books. Laboratory directors are provided the awarded number of hours and the dollar equivalent for each lab recipient. The recipient has the option of using either time or dollars to complete their learning activity.

The Learning and Growth Program funds can also be used to develop short courses designed to provide learning opportunities for GTRI employees. The intent of this is to pursue cross-lab learning. However, these funds are not to be used to develop short courses designed to be delivered externally to GTRI. The research initiative program provides up to 40 hours time and/or funds for cross-lab learning activities. This program's purpose is to provide learning opportunities that include other researchers in activities that impact the strategic goals of GTRI.

COMPLIANCE ASSURANCE HIGHLIGHT

Teamwork (from the GTRI Code of Business Conduct):

We multiply the creativity, talents and contributions of both individuals and GTRI through collaborative efforts that leverage individual diversity. Shared trust and open communication provide a supportive environment that enables achievement of team goals.

We are committed to providing an equal opportunity work environment where everyone is treated with fairness, dignity, and respect. We comply with all laws, regulations and policies related to non-discrimination in all of our personnel actions. Such actions include hiring, staff reductions, transfers, terminations, evaluations, recruiting, compensation, corrective action, discipline and promotions. No one shall discriminate against any individual with a disability with respect to any offer, term or condition of employment. We will make reasonable accommodations for the known physical and mental limitations of otherwise qualified individuals with disabilities.

We are mindful of organizational conflicts of interest. Appropriate steps must be taken to recognize and avoid potential organizational conflicts in which one business unit's activities may preclude the pursuit of a related activity by another Georgia Tech business unit. GTRI's Deputy Director's Office can provide support and assistance in this area.

ETHICS ON THE JOB

Using Frequent Flyer Miles

- Q:** I am a GTRI division chief, and I travel a lot for business development purposes. I have many frequent flyer miles. While I sometimes use these miles to get free tickets for professional development travel, I also use them for personal travel and for travel by my husband and other family members. Is that okay?
- A:** Georgia Tech policy permits the personal use of travel awards. The important thing to remember is that accumulation of these awards must not affect our decisions about airlines or hotels to the detriment of the Institute or the sponsor. We must make the most economical travel arrangements that are appropriate for our business purposes, regardless of any benefits that may accrue to us personally.

GTRI RISK MANAGEMENT

Harassment Complaints

GTRI's philosophy is to promote a work environment free of harassment and consistent with our Code of Ethics and Code of Business Conduct. To ensure that no member of our community, including administrators, faculty, staff, or students be subjected to sexual harassment by another, a policy and procedure is in place to create an atmosphere in which individuals who believe that they are the victims of harassment are assured that their complaints are dealt with fairly and effectively.

More on the policy, definitions of sexual harassment and the procedures for filing a complaint can be found in the GTRI Policy and Procedures Manual at: <https://webwise.gtri.gatech.edu/Corporate/Policies/PPM/Personnel/per340.htm>

TUITION REIMBURSEMENT DEADLINES

July 16, 2008

Approved Tuition reimbursement applications for Fall 2008 are due July 16.

Send your GTRC applications to Gaynell Scott in PST, mail code 0807.

Send your BOR and STRAP applications to Deborah Covin-Wilson in OOD, mail code 0206.

For information and applications use the link <https://newwebwise.gtri.gatech.edu/pst/forms/tuition>

NOTE: The above are deadline dates and must be met by all Tuition Reimbursement Program applicants. PST is located at 430 Tenth Street, North Building, Room 117.

STL Chief Scientist Lon Pringle Named Lab Director

Lon Pringle, a long-time research scientist with the Georgia Tech Research Institute (GTRI), has been appointed director of GTRI's Signature Technology Laboratory (STL), succeeding John Meadors.

Pringle, formerly STL's chief scientist, brings to his new assignment two decades of GTRI experience and a clear sense of enthusiasm about the lab's work.

"Being chief scientist of this lab was the most exciting time in my career," he said. "I got to interact with many people, and understand how different projects fit together. That's helping me now, as director, to formulate new research approaches we can look to for the future."

Former director Meadors, now retired, will remain involved with the lab part-time as needed. He will continue to work on projects in which he is already heavily involved.

Pringle emphasizes that he doesn't envision major changes in STL's basic operation. That's because the lab's work – centered largely on signal processing, the electromagnetic properties of materials and apertures, and secure Internet data transfer – is progressing well.

"We're currently experiencing an upswing in growth, and it would make little sense to shake things up a lot," he said.

Nevertheless, he adds, STL is due for a few adjustments in research emphasis and organization. Like GTRI as a whole, STL focuses on contract

research and needs to keep up with sponsors' priorities, which makes periodic reorganization beneficial.

To enhance growth, Pringle says, STL will increase emphasis in two areas. One is a research area that goes way back at STL – development and analysis of meta-materials.

"Over time our lab has shifted away from that emphasis, and we're going to try to swing back and do more of that work," he said. "We're the major materials group at GTRI, and we want to retain that business -- so that will be a renewed emphasis for us."

Another new STL focus will involve bringing projects to higher levels of integration. Pringle explains that over the past decade or so, STL has progressed from producing mostly paper studies to developing increasingly complex prototypes.

Now the lab will emphasize the next step -- integrating prototypes into larger systems that can then be tested. This type of advanced integration might involve systems developed by other GTRI labs as well as those developed by major defense contractors.

The new STL director earned a bachelor's degree in electrical engineering from Georgia Tech in 1977, and he received a PhD in theoretical physics from the University of South Carolina in 1988. He joined GTRI in 1988 and became a principal research scientist in 2000.



Pringle lives in Atlanta's Virginia-Highland neighborhood with his wife, Lisa, and his three children, Katie, 12; Madison 10; and James, 6. His hobbies include biking and running, and he is also an avid operagoer – an interest that works out well for the Pringle family since Lisa is a member of the Atlanta Opera Chorus.

Though STL's 110 or so employees will see few changes beyond prototype integration and renewed materials emphasis, the lab will remain poised for continued growth, Pringle says. He points out that STL's organizational chart reveals a large number of small divisions; in other words, many smaller groups of researchers.

"That kind of organization emphasizes cross-coupling, and it encourages divisions to reach out to other groups whenever it's necessary to accomplish a project," Pringle says. "It's an approach that has worked for us in the past, and it will help us to stay primed for future growth."

Continued From Page 1

- **Concept/Tagline Testing (Phone-based/PowerPoint Survey):** A second round of research testing was conducted among GTRI researchers as well as business executives and others involved in the outsourced R&D purchase decision. The purpose was to gain insight from them about the key concepts (Problem Solvers, Expertise) and potential taglines for each concept.
- **Concept/Tagline Chosen:** The chosen concept of "Problem Solvers" conveys the very essence of what GTRI has been doing since 1934. And,

it allows for the reinforcement of the exceptional expertise found within GTRI. The concept is emphasized through the new GTRI tagline "Problem. Solved."

This concept works well because it speaks to the needs of both government and commercial companies who want the right solution. And it is positive, active and flexible while focusing on the end result. The concept also serves both to describe what GTRI does and the key benefit it provides to its sponsors and other stakeholders.

It was quite a journey getting to Problem. Solved. GTRI now has a research-based and stakeholder-tested brand that fully supports the organization's business objectives.

As a GTRI employee, you are encouraged to use the new tagline in presentations, email signatures, handouts and in any other way you see fit. The new GTRI brand, and the research that went into it, served as the foundation for our new website and annual report. You will see the Problem Solver theme woven throughout both.

Now when people ask you what GTRI does – you can say/tell them we're Problem Solvers!

Delta Dental awards \$50,000 Grant to GTRI to Improve Quality Care in Community Clinics

Delta Dental Insurance Company announced the award of a \$50,000 grant to the Georgia Tech Research Institute (GTRI) to improve efficiency in free and low-cost community clinics that provide care for thousands of underserved residents in Georgia.

Associations between periodontal disease and heart disease and other medical-dental correlations have been studied and identified. Early identification of at-risk patients can be used to ensure that proper diagnosis and preventive treatments are performed and coordinated between the medical and dental teams involved. Today, however, many of the technology tools necessary to coordinate care are either unavailable or prohibitively costly.

GTRI's community clinic initiative is focused on developing low-cost, advanced technologies that are designed specifically for the unique needs of community clinics that provide essential health care to the uninsured in the State of Georgia. The goal of the program is to provide tools and information to the health care professionals in these clinics to enable them to initiate the appropriate preventive treatments to reduce the chance of patients developing disorders that would later require more expensive services.

"By providing these new technologies to the clinics, we are hoping to allow the doctors to provide patient-specific preventive care while they are treating the patient's existing conditions" said Jeffery J. Sitterle, Ph.D., former Chief Scientist and Director of the Dental Technology Center at the Georgia Tech Research Institute. "These preventive treatments will reduce the severity of future disorders these patients may develop, which can reduce the costs of operating community clinics and allow more of the population to be served by these clinics."

"We're pleased to be able to support such an important contributor to community health," said Marilyn D. Belek, DMD, Chief Dental Officer and Executive Vice President of Delta Dental Insurance Company. "Our corporate mission is to provide access to dental care to as many people as possible because we know how important oral health is to overall health. It's gratifying, both professionally and personally, to help advance the philanthropic efforts of this unique project."

The research grant will be used to help fund new technology, which includes chartless record-keeping, digital treatment plans and imaging,



among other cutting-edge practices, as well as "decision aides" for health care providers, based on overall health relationships that will allow doctors and dentists to identify necessary preventive treatments – both oral and medical.

Johnston Donation for SENSIAC Library

Special thanks to retired researcher, Stephen Johnston who donated his personal papers to GTRI. His International Radar Directory to be housed in the SENSIAC housed in the seal library in Cobb provides a valuable historical record of both US and international radar systems and their technology development. Mr. Johnston's donation will be a vital asset in supporting GTRI's analysis of radar technology trends and radar system capabilities for both government and industry partners.



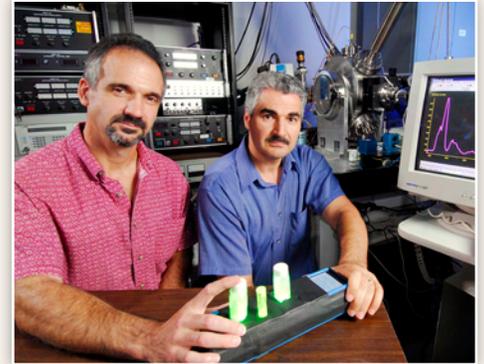
Improved Decontamination: Optimized UV-C Phosphor Kills Anthrax Spores in Combination with X-rays

In October 2001, letters containing anthrax spores were mailed to several news media offices and two U.S. senators, killing five people and infecting 17 others. Clearing the Senate office building of the spores with chlorine dioxide gas cost \$27 million, according to the Government Accountability Office. Cleaning the Brentwood postal facility outside Washington cost \$130 million and took 26 months.

Researchers at the Georgia Tech Research Institute (GTRI) in collaboration with Austin-based Stellar Micro Devices, Inc. (SMD) have developed prototypes of a rapid, non-disruptive and less expensive method that could be used to decontaminate bioterrorism hazards in the future.

<http://www.gtri.gatech.edu/casestudy/killing-anthrax-spores>

Georgia Tech Photo: Gary Meek



GTRI research scientists Brent Wagner and Hisham Menkara optimized a UV-C phosphor for use in a flat panel system with X-rays that can kill anthrax spores in two to three hours without any lingering effects.



Researchers Robert Hendry, Luis Somoza and Charlene Bayer (left to right) designed and tested the vest Somoza is wearing, which they hope will help them to better understand the causes of asthma attacks.

Asthma Attack: Vest-based Sensors Monitor Environmental Exposure to Help Understand Causes

Researchers at GTRI have developed a sensor system that continuously monitors the air around persons prone to asthma attacks. Worn in the pockets of a vest, the new system could help researchers understand the causes of asthma attacks.

“We are investigating whether we can go back after an asthma attack and see what was going on environmentally when the attack started,” said Charlene Bayer, a GTRI principal research scientist.

This research was supported by the U.S. Department of Housing and Urban Development and initial funding from the GTRI Independent Research and Development (IRAD) program.

<http://www.gtri.gatech.edu/casestudy/asthma-vest-helps-id-asthma-causes>

GTVC: Mapping Tool Allows Emergency Management Personnel to Visually Track Resources

Tracking the location and availability of resources such as hospitals, transportation equipment and water during an emergency situation can be life-saving.

A collaborative mapping tool developed by GTRI is helping emergency management officials better coordinate event and incident planning – and real-time response.

GTRI has teamed with Atlanta-based company Emergency Visions to provide mapping capabilities for a resource database the firm developed to identify, activate, track and coordinate response assets. The GTRI and Emergency Visions applications were selected by the Florida Division of Emergency Management in June 2007 as part of a solution that combines these comprehensive technology tools with the training and management expertise of a team led by the International City/County Management Association (ICMA).

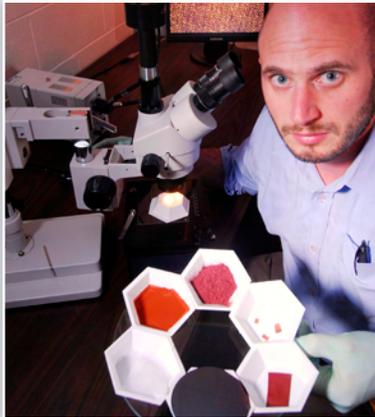
<http://www.gtri.gatech.edu/casestudy/mapping-tool-tracks-emergency-resources>

Georgia Tech Photo: Gary Meek



Kirk Pennywitt, a senior research engineer in the Georgia Tech Research Institute, demonstrates GTVC, a mapping tool that allows emergency management personnel to visually track resources such as hospitals and water.

Georgia Tech Photo: Gary Meek



Georgia Tech researcher Jason Nadler poses with materials used to form copper structures that are precursors to explosive compounds. The materials, formed on chips, are being used to improve detonators used by the U.S. Navy.

Explosives on a Chip: Unique Porous Copper Structures Enable New Generation of Military Micro-detonators

Tiny copper structures with pores at both the nanometer and micron size scales could play a key role in the next generation of detonators used to improve the reliability, reduce the size and lower the cost of certain military munitions.

Developed by a team of scientists from GTRI and the Indian Head Division of the Naval Surface Warfare Center, the highly-uniform copper structures will be incorporated into integrated circuits – then chemically converted to millimeter-diameter explosives. Because they can be integrated into standard microelectronics fabrication processes, the copper materials will enable micro-electromechanical (MEMS) fuzes for military munitions to be mass-produced like computer chips.

<http://www.gtri.gatech.edu/casestudy/explosives-chip>

Improving the Lifetimes of OLEDs

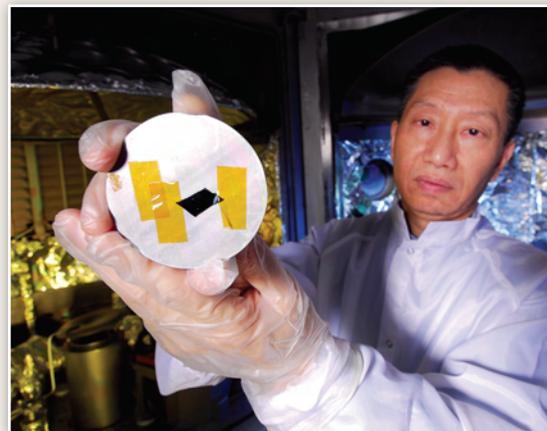
GTRI researchers have developed an improved organic light emitting diode (OLED) sealing process to reduce moisture intrusion and improve device lifetime.

OLEDs are promising for the next generation of displays and solid state lighting because they use less power and can be more efficiently manufactured than current technology. However, the intrusion of moisture into the displays can damage or destroy an OLED's organic material.

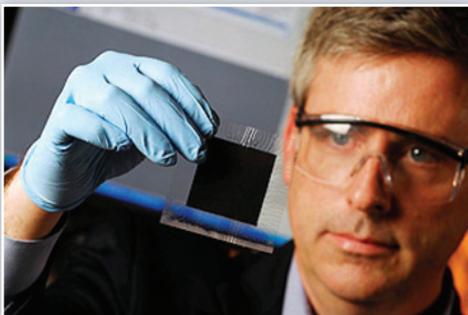
<http://www.gtri.gatech.edu/casestudy/improving-oled-lifetimes>

GTRI senior research scientist Wusheng Tong has reduced moisture intrusion into OLEDs by replacing the typical glass enclosure with a thin-film barrier formed by a less expensive conventional deposition method called ion assisted deposition.

Georgia Tech Photo: Gary Meek



Georgia Tech Photo: Gary Meek



Tom Fuller, a professor in Georgia Tech's School of Chemical and Biomolecular Engineering and GTRI Principal Research Engineer, believes that understanding how and why fuel cells fail is the key to both reducing cost and improving durability.

Improving Fuel Cell Durability: Research into Better Fuel Cell Materials and Designs Starts with Studying Failures

Fuel cells can be expensive and they typically don't last as long as their internal combustion counterparts. Researchers in the GTRI Center for Innovative Fuel Cell and Battery Technologies believe that understanding how and why fuel cells fail is the key to both reducing cost and improving durability.

Center director Tom Fuller has been trying to solve what he deems the top three durability problems since he joined GTRI from United Technologies three years ago.

"My philosophy is if we can really understand the fundamentals of these failure mechanisms, then we can use that information to guide the development of new materials or we can develop system approaches to mitigate these failures," said Fuller, who is also a professor in Georgia Tech's School of Chemical and Biomolecular Engineering (ChBE).

<http://www.gtri.gatech.edu/casestudy/improving-fuel-cell-durability>

Maintaining Air-Traffic Radio with Redesigned Modules

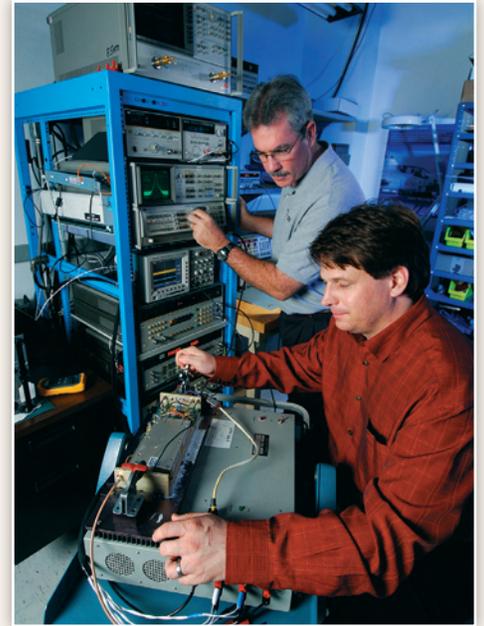
GTRI engineers are helping keep air traffic control radios on the job until newer designs can replace them. The radios—known as AN/GRT-21 and AN/GRT-22 transmitters and AN/GRR-23 and AN/GRR-24 receivers—first went into service in 1968, and about 7,500 are still on the job.

“Many parts now unavailable were originally manufactured by hand, and would be very expensive to reproduce today because of the manual labor involved,” said Russell S. McCrory, a GTRI senior research engineer. “Even more challenging are semiconductor components, such as transistors and diodes, that are no longer manufactured.”

Eventually, all Department of Defense radios are due to be replaced by a reprogrammable software-based technology known as the Joint Tactical Radio System (JTRS). Under current timetables, however, the GRT/GRR ground radios will wait for replacement until 2020-2025.

<http://www.gtri.gatech.edu/casestudy/maintaining-air-traffic-radio>

Georgia Tech Photo: Gary Meek



Research at GTRI solves problems for government and industry. We are uniquely positioned to transfer expertise and innovation from one market to another, which amplifies the positive impact of our work and increases the value to our customers.



Bettcher Industries Donates \$125,000 to GTRI's Food Processing Technology Building Expansion

Bettcher Industries, Inc., an innovative world leader in the design and manufacture of food processing equipment and cutting tools, has made a donation of \$125,000 toward the construction of Phase II of the Georgia Tech Research Institute's Food Processing Technology Building.

Bettcher Industries, an Ohio-based corporation, is also the parent company of Gainco, Inc., a Gainesville, Ga., manufacturer of weighing, sizing, sorting and distribution equipment for meat and poultry processing plants. Bettcher Industries is the first company to donate to the \$3 million fund-raising campaign that will add 10,000 square feet of laboratory and office space devoted to human factors, food safety and bioprocessing research.

Bettcher and Gainco officials were recognized at a luncheon on Tuesday, May 13, at the facility, which is located on Georgia Tech's campus in Atlanta.

Commenting on the donation, Larry Bettcher, president, stated, "We are pleased to support the continuing research and development efforts of GTRI. They make a strong contribution to R&D activities in the food processing industry. Their pioneering work has made it easier for companies like ours to develop and commercialize better systems and machinery for the benefit of our customers."

Bettcher cited the development of "vision" quality control technology as one example, where in a digital camera and control system screens products for quality defects on a production line in real-time. "We enjoy a mutually rewarding collaboration with GTRI that taps into our respective strengths – fundamental research on their side and practical, solutions-focused application of the technology on ours," he noted.

J. Craig Wyvill, chief of GTRI's Food Processing Technology Division, expressed appreciation for the corporate donation as well as the ongoing relationship between the company and the research institute. "Our collaboration with Bettcher and Gainco has been strong, and we hope to broaden it further with the additional capabilities planned with the building expansion," he said.

Opened in 2005, the Food Processing Technology Building has positioned itself as a world-class research center for collaborative food processing technology development, academic research and public interaction. The existing 35,000-square-foot



Picture front row (left to right) John Pierson, GTRI; J. Craig Wyvill, GTRI; Larry Bettcher, Bettcher Industries; Don Esch, Bettcher Industries; Pictured back row (left to right) Gary McMurray, GTRI; Doug Britton, GTRI; Joe Cowman, Gainco; Jim Peterson, Gainco; Wayne Daley, GTRI; Stephen Cross, GTRI.

facility houses laboratory and office space for R&D in the fields of automation technology, information technology and environmental systems, in addition to meeting and educational facilities. The \$8 million facility, which was funded by a mix of state, corporate and industrial dollars, serves as headquarters for GTRI's Food Processing Technology Division.

Bettcher Industries, a family-owned company established in 1944, produces electric and pneumatic hand trimmers. Its Whizard® Trimmer product is an icon in processing operations in more than 50 countries throughout the world. The company's customers include meat, poultry and seafood processors in the United States, Eastern and Western Europe, Latin America, Asia and other meat-producing regions.

The Food Processing Technology Division at GTRI is a national leader in the development of robotic, computer vision, food safety and environmental technologies for the food processing industry.



Pictured (left to right) Don Esch, executive vice president of Bettcher Industries; Larry Bettcher, president of Bettcher Industries; Stephen Cross, director of the Georgia Tech Research Institute; and J. Craig Wyvill, chief of GTRI's Food Processing Technology Division.

Leanne West (EOSL) was elected Chair of Georgia Tech's Executive Board.

Tom McDermott became the GTRI Deputy Director and Director of Research on 9/1.

Terry Tibbitts was appointed the ELSYS Laboratory Director effective 9/1.

Krish Ahuja assumed his full-time position as Director/General Manager of GT Ireland.

Lon Pringle (STL) was selected as the new STL Director, effective 3/28/2008.

Dennis Folds (ELSYS) begins a half time, one year assignment as GTRI Chief Scientist.

Bob Beasley (Arlington office) who becomes the new GTRI Director of Business Development, reporting to Tom McDermott (DDR).

Leanne West (EOSL) was selected for the 2008 class of Leadership Georgia, a leadership-training programs for young business, civic and community leaders with the desire and potential to work together for a better Georgia.

Jean Swank, Jeanne Balsam, and Mark Pellegrini (ELSYS) wrote the chapter entitled "SQA for Small Projects" published in the *Handbook of Software Quality Assurance*.

Carlee Bishop (ELSYS) was selected for a joint faculty appointment with the School of Aerospace Engineering.

Nick Faust (EOSL) was elected to the board of the Dian Fossey Gorilla Fund International.

Jeff Jenkins and the ISD staff have been asked by the College of Computing to provide administrative computing support to that college using the Exchange Server.

Gisele Bennett (EOSL) received her private pilot's license.

Jud Ready (EOSL) received his rotorcraft (helicopter) pilot's license.

Ron Bohlander (ITTL), was awarded the Joseph A. Siegel Service Award for significant and unique contributions which benefit the Society of Manufacturing Engineers (SME).

George Brown, Dan Campbell, Larry Corey, Jeff Holder, Ryan Holman, Byron Keel, Jeff Kemp, Daniel Leatherwood, Barry Mitchell, Ben Perry, Sam Piper, Ed Reedy, Anya Traille (all of SEAL) and Mike Harris

(EOSL) have been recognized by the Army's PM RADARS for their support on the EQ-36 (Advanced Firefinder) Source Selection.

Bill Melvin (SEAL) was selected as a Fellow of the Institute of Electrical and Electronic Engineers (IEEE).

Mike Cathcart (EOSL) was selected as a senior member of the Institute of Electrical and Electronic Engineers (IEEE).

David Roberts (EOSL) was selected as a Senior Member of the Institute of Electrical and Electronics Engineers (IEEE).

Tom Horton (DO) was re-elected for a two year term on the Executive Committee and Board of Directors of AFCEA International.

Lora Weiss (ITTL) was appointed to the Board of Directors of the Association for Unmanned Vehicle Systems International.

Raj Vuchatu (ESD) has been elected as the non-lab General Faculty Assembly (GFA) member.

Jim Wiltse (DO, retired), Sam Piper (SEAL), and Mike Harris (EOSL) authored chapters in books that were just published:

RF and Microwave Applications and Systems, Edited by Mike Golio, CRC Press, 2008

Chapter 14, "Continuous Wave Radar" by Samuel O. Piper and James C. Wiltse
Chapter 15, "Pulse Radar", by Josh T. Nes-smith

RF and Microwave Passive and Active Technologies, Edited by Mike Golio, CRC Press, 2008.

Chapter 11, "The Fresnel-Zone Plate Antenna", by James C. Wiltse

Chapter 29, "Material Properties of Semiconductors" by Mike Harris

Tom Fuller (ATAS) received The Research Award of the Energy Technology Division of the Electrochemical Society.

The Peachtree Roost, the local chapter of the Association of Old Crows (AOC) www.crows.org – the professional society for the science and practice of Electronic Warfare (EW), Information Operations (IO), and related disciplines - celebrated its 30th anniversary on 11/29/2007.

30 GTRI faculty were notified of promotions, effective 7/1/2008. They are:

Principals: James Acree (PRE, STL), Dinal Andreasen (PRE, ATASL), Jeanne Balsam (PRA, ELSYS), Byron Coker (PRE, ELSYS), Jeff Evans (PRE, ITTL), Lee Evans, (PRE, ELSYS), Dave Fentem, (PRE, ELSYS), Wiley Holcombe (PRE, ATASL), Robert Howard (PRE SEAL), Brian Mayhew (PRE, ELSYS), Leigh McCook (PRA, ITTL), Gary McMurray (PRE, ATASL), Dan Ortiz (PRS, ELSYS), Tracy Wallace (PRE SEAL).

Seniors: Sarah Allen (SRE, ELSYS), William Cutts (SRE, ELSYS), Karen Everson (SRT, SEAL), Jonathan James (SRE, EOSL), Brandon McMahan (SRE, HRL), Jie Xu (SRS, EOSL).

RS II & RE II: Kristen Bellamy, (RSII, ELSYS), Frank Caldwell (REII SEAL), Tom Callis (REII, ELSYS), Dustin Cline (REII, ELSYS), Bartholomew De-Backer (REII, ELSYS), Olga Kemenova (REII, ATASL), Harry Menhorn (REII, ITTL), Alexander Samoylov (RSII, ATASL), Hilarie Shubert (REII, ELSYS), Kelly Stevens (RSII, STL).

The following employees were recognized at a campus awards ceremony for completion of training certificate programs offered through the Office of Organizational Development:

Office Professional Certificate (OPC):

Katherine Brown (EOSL),
Ginny Myers (EOSL),
Patricia Rose (ITTL)

Supervisory Development Certificate (SDC) :

Linda Carroll (BSD),
Kathleen Falconer (RP),
Cynthia LaGessee (MAPS),
Marchelle Towns (MAPS)

Management Development Certificate (MDC):

Valerie Johnson (RSD),
Cynthia LaGessee (MAPS),
Gaynell Scott (PST),
Frances Shiflett (MAPS)

Departmental Financial Management Certificate (DFMC):

Tam Muto (BSD),
Frances Shiflett (MAPS)

Course Leader (CL):

Michelle Dunham (ELSYS),
Gaynell Scott (PST)

Defining Customer Service (DCS):

Patricia Anderson (BSD),
Tamika Bryant (MAPS),
Linda Carroll (BSD)

Instructor:

Jim Beisner (PST)

Gaynell Scott (PST) was selected for the Georgia Tech Master's Series, a competitively selected leadership program that allows participants to gain exposure to academic, research, and business enterprises through campus tours and discussions.

The GTRI Communications Office received a Golden Flame Award from the International Association of Business Communicators (Georgia Chapter) for the *GTRI Insider* Employee Newsletter. The *GTRI Insider* also received a Phoenix Award from the Public Relations Society of America (PRSA) – Georgia Chapter. GTRI's Communications Office and the GT Research News Office also received a Grand Award from the Council for the Advancement and Support of Education in the media relations category for work done to promote GTRI's carbon nanotube

solar cell work. The communications Office also brought home a Technology Marketing Award (TAMY) from the [Technology Association of Georgia](#) in the Corporate Repositioning – Large Company category.

If you'd like to submit an accolade for our next issue please email kenya.ervin@gtri.gatech.edu or GTRIinsider@gtri.gatech.edu

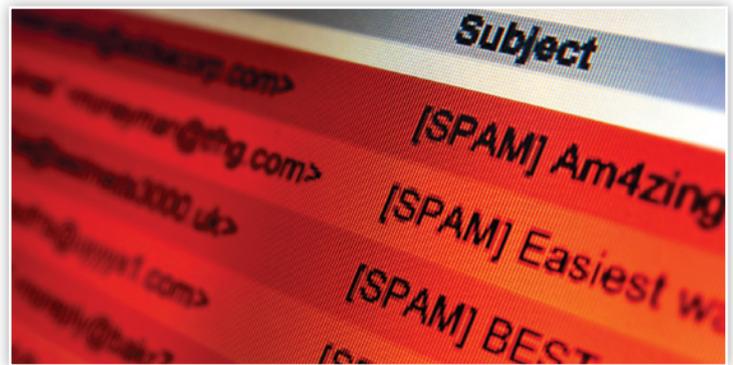
GTRI Spam Filtering: Perception vs. Reality

By Jeff Jenkins, Director ISD (jeff.jenkins@gtri.gatech.edu)

For the last 3 years we've had a Barracuda spam firewall in place that was available for anyone in GTRI to use. Of all the IT issues we've fixed, this one has been the most divisive. At one extreme, we are getting pounded on by users who are having 300 spams a day blocked and 10 are getting through. They don't care if they have valid email blocked, they want the 10 spams that got through blocked and 0 to get through. On the other extreme there are those that think email is so vital that they can't lose a single email. I can understand and sympathize with both.

So, with that introduction, here are some facts:

- 1) GTRI's front end receives roughly 400,000 emails a day. After virus filtering and spam filtering about 30,000 make it to people's desktops. The rest are either blocked or quarantined.
- 2) Each user account has a slider control that allows them a choice at what level mail is considered spam and is either blocked or quarantined. It's totally up to the user to decide the comfort/risk level.
- 3) Individuals have the ability to blacklist addresses that they are tired of getting mail from including using wildcards. So, yes, if you blacklist *.com, *.net, and *.edu you will cease to get 99% of your email. This has already happened a couple of times.
- 4) If you are going to forward your email outside GTRI, you must have lab director approval AND it must flow through the Barracuda first. The reason for the lab director approval is we need to know where company mail is going. The reason it must flow through the Barracuda before it goes out is that spam being forwarded out through our servers makes it look like GTRI is a spam originator and that gets GTRI put on a blacklist.
- 5) The Barracuda, just like every other spam firewall on the planet, maintains a reputation list (blacklist) of known spammers in the world. If your friends/sponsors get put on a blacklist, please don't ask us to whitelist them on our system. All spam firewalls on the



planet use the same type of reputation lists. The solution isn't for your friend to call all 50,000 IT departments in the world and get whitelisted, it's that he/she needs to call their ISP and get off the blacklist.

- 6) The Barracuda is an off-the-shelf product, which means we can only manipulate certain parts of it. For instance, I think that there should be a check box in there that says "If the incoming email subject is using Chinese/Russian/Klingon characters, then trash it". But, the important thing to note is, if we could we would.

People have wildly different opinions about blocking spam and sometimes valid emails are blocked by mistake. That's why we chose a system that allows, where possible, users to choose their level of spam filtering, up to and including not filtering at all. The one thing you can't fix yourself is if someone you know gets put on a blacklist. The IT department that is trying to send the email needs to work that one out.

Lab CSRs have the specifications on how to use the Barracuda and how to customize it. So, if you have any questions on how to loosen the filter or tighten it down, feel free to give them a call.

HIRES AND RETIRES

One of GTRI's goals is to hire the best, equip the best, and reward the best employees. The following people have recently joined or retired from the GTRI team!

Welcome to the GTRI Family!

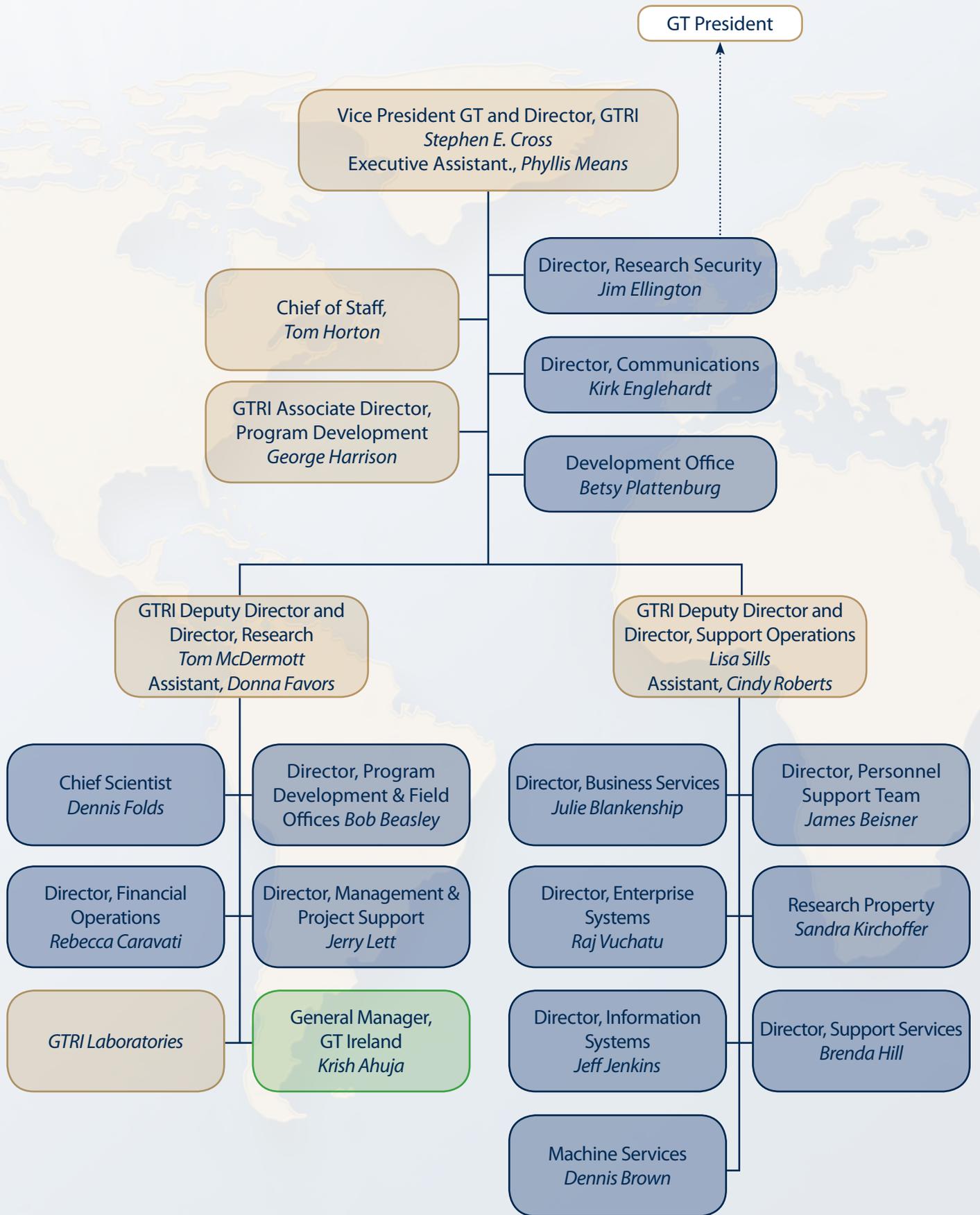
START DATE	DEPT./LAB	NAME	TITLE
3/5/07	STL	BISHOP, SHARON K.	PROGRAM MANAGER
3/19/07	SS	HAMID, AZIM S.	DELIVERY WORKER II
3/19/07	SS	WILLIAMS, CHRISTOPHER H.	CUSTODIAN I
3/26/07	ISD	WOODS, BRIAN S.	COMPUTER SERVICES SPEC II
4/16/07	SIO	SLUSS-WARD, RACHEL L.	BUSINESS MANAGER
4/24/07	SEAL	ENTREKIN, JAYDON M.	ELECTRONICS TECHNICIAN I
5/14/07	STL	CAMPBELL, DEREK D.	RESEARCH ENGINEER I
5/17/07	ITTL	BOYLE, KAREN C.	ADMIN ASSISTANT I
5/22/07	ITTL	LEWIS, CHRISTOPHER S.	RESEARCH SCIENTIST I
5/22/07	EOSL	HARDIN, CHARLES A.	RESEARCH ENGINEER I
6/1/07	ELSYS	PALMER, TIMOTHY F.	RESEARCH ENGINEER I
6/1/07	ELSYS	GURTNER, JAMES L.	RESEARCH TECHNOLOGIST I
6/4/07	ELSYS	MCCLUNE, TIM	RESEARCH ENGINEER I
6/18/07	EOSL	TEAGUE, JAMES R.	PRINCIPAL RESEARCH SCIENTIST
7/2/07	ITTL	ALEXANDER, BRANDON D.	RESEARCH SCIENTIST I
7/2/07	SEAL	COOK, DANIEL A.	SENIOR RESEARCH ENGINEER
7/9/07	ELSYS	GIRMAN, GARTH	RESEARCH ENGINEER I
7/12/07	ITTL	BUCHANAN, DANIEL W.	SYSTEMS SUPPORT SPECIALIST II
7/16/07	SS	LAND, JACK B.	MAINTENANCE/CONST WORKER I
7/30/07	RSO	ELLINGTON, JAMES R.	DIR-RESEARCH SECURITY
8/6/07	STL	HEINRICH, KARL J	RESEARCH SCIENTIST I
8/6/07	ITTL	PATER, JESSICA A.	RESEARCH ASSOCIATE I
8/10/07	ITTL	PARKS, JONATHAN L.	RESEARCH ENGINEER I
8/13/07	STL	SHIELDS, JOHN A.	RESEARCH SCIENTIST II
8/13/07	ISD	BROWN, PAUL B.	SYSTEMS SUPPORT SPECIALIST I
8/14/07	ELSYS	SANDS, CRAIG A.	SENIOR RESEARCH SCIENTIST
8/16/07	SS	WILLIAMS, CHYTEAL N.	MAINTENANCE/CONST WORKER II
8/20/07	ITTL	CLUTE, MARK A.	SYSTEMS ANALYST III
8/27/07	BSSVC	CAYLOR, EVAN C.	PROJECT SUPPORT ANALYST II
9/4/07	ELSYS	PERRY, BRANDON H.	RESEARCH ENGINEER I
9/5/07	EOSL	VAUGHAN, RICHARD B.	RESEARCH ENGINEER I
9/11/07	STL	TURNER, JAMES F.	PRINCIPAL RESEARCH ENGINEER
9/12/07	EOSL	THOMAS, ALAN M.G	RESEARCH SCIENTIST II
9/19/07	EOSL	YOUNG, ELAINE	ADMINISTRATIVE SUPERVISOR SR
9/28/07	MS	TOBER, JAMES	INSTRUMENT MAKER I
10/1/07	ELSYS	LILLY, CHERYL P.	PROJECT COORDINATOR II
10/15/07	ITTL	DUNN, THOMAS H.	SENIOR RESEARCH ENGINEER
10/29/07	SS	STEPHENS, MARQUIS	MAINTENANCE/CONST WORKER II
11/1/07	SEAL	DRAKE, BARRY L.	SENIOR RESEARCH SCIENTIST
11/12/07	STL	SCHULTZ, JESSICA M.	RESEARCH SCIENTIST I
11/21/07	STL	SWARNER, JONATHAN D.	RESEARCH EQUIPMENT SPECIALIST
11/28/07	ELSYS	COLE, CHARLES K.	PRINCIPAL RESEARCH ENGINEER
12/11/07	ELSYS	HOULROYD, JENNY L.	RESEARCH SCIENTIST I
12/17/07	ELSYS	DELOCKERY, JENNIFER M.	RESEARCH SCIENTIST I
12/18/07	SEAL	KRAMER, JASON L.	RESEARCH ENGINEER I
12/18/07	STL	KAYSE, JOSHUA A.	RESEARCH ENGINEER I

12/20/07	ELSYS	BOLLWEG, NICHOLAS R.	RESEARCH SCIENTIST I
1/2/08	HRL	MEINECKE, LEE	COMPUTER SERVICES SPEC III
1/2/08	ITTL	CONTRADA, ANTHONY	RESEARCH ENGINEER II
1/7/08	ELSYS	STEWART, RYAN C.	RESEARCH ENGINEER I
1/7/08	STL	STATON, PATRICK L.	RESEARCH SCIENTIST I
1/7/08	SEAL	NEELY, ROMON E.	RESEARCH SCIENTIST I
1/7/08	ELSYS	KARNIK, DANIEL S.	RESEARCH ENGINEER I
1/11/08	ELSYS	MISHOE, ANDREW J.	RESEARCH ENGINEER I
1/14/08	ELSYS	GEDDIS, DEMETRIS L.	RESEARCH ENGINEER II
2/1/08	STL	SILVER, KATHLEEN G.	RESEARCH ENGINEER I
2/1/08	SEAL	SIMMONS, JACK H.	ELECTRONICS SPECIALIST
3/3/08	ELSYS	SWAFFORD, SAMANTHA N.	RESEARCH ENGINEER I
3/3/08	STL	FARNUM, JOHN D.	RESEARCH SCIENTIST II
3/3/08	ELSYS	HALL, ROBERT	RESEARCH ENGINEER I
3/18/08	STL	WANG, YAN	RESEARCH SCIENTIST II
3/24/08	STL	GUNN, GREGORY J.	RESEARCH ENGINEER I
4/1/08	SEAL	DAVIS, MICHAEL S.	RESEARCH ENGINEER II
4/7/08	ELSYS	DUNHEW, CHARLES C.	SENIOR RESEARCH ASSOCIATE
4/7/08	ELSYS	MULKEY, NICHOLAS A.	RESEARCH ENGINEER I
4/14/08	SEAL	ROMAN, JAMIE R.	PRINCIPAL RESEARCH ENGINEER
4/21/08	ELSYS	LIU, BRIAN T.	RESEARCH ENGINEER I
4/28/08	STL	FAIRCLOTH, DANIEL L.	RESEARCH ENGINEER II
5/1/08	STL	FRANCIS, KELSEY M	RESEARCH SCIENTIST I
5/6/08	ELSYS	BEARD, BRETT S	RESEARCH SCIENTIST II
2/18/08	ELSYS	WEST, MICHAEL E.	SENIOR RESEARCH ENGINEER
2/1/08	STL	SILVER, KATHLEEN G.	RESEARCH ENGINEER I
2/7/08	SEAL	MATTHEWS, JENNY L.	RESEARCH ENGINEER I
3/17/08	EOSL	PERRY, RAYMOND A.	PROFESSIONAL
4/1/08	ELSYS	DORIOT, CLINT A.	RESEARCH ENGINEER I
4/14/08	ESD	BRANCH, THOMAS A.	WEB DEVELOPER
5/1/08	ITTL	COBB, JOHN D.	SENIOR RESEARCH ENGINEER
5/1/08	ELSYS	HUTTO, ANGELA S.	SECRETARY SENIOR ADMIN
5/5/08	ELSYS	OWENS, MICHAEL SHANE	RESEARCH ENGINEER I
5/5/08	ELSYS	QUIGGLE, MARGARET A.	ADMIN ASSISTANT I
5/12/08	ELSYS	NEWTON, DONTEL L.	RESEARCH ENGINEER I
5/19/08	EOSL	MCCORMICK, WILLIAM S.	RESEARCH ENGINEER I
2/1/08	SEAL	SIMMONS, JACK H.	ELECTRONICS SPECIALIST
4/14/08	ELSYS	HARRIS, ANIKA T.	ADMIN ASSISTANT II

Goodbye From the GTRI Family!

START DATE	DEPT./LAB	NAME	TITLE
12/1/07	SS	SENN, D. W.	ADMIN SUPERVISOR II
9/29/07	STL	SULLIVAN, SANDRA C.	TECHNICAL MANAGER
4/1/08	STL	MEADORS, JOHN G.	DIR-RESEARCH
5/1/08	ELSYS	STRIKE, TIMOTHY M.	PRINCIPAL RESEARCHTECHNOLOGIST

GTRI ORGANIZATIONAL STRUCTURE



In the months since I joined GTRI, I have had the pleasure of working with management and many members of the engineering/scientific staff. It has been encouraging to see that members of our professional community realize the importance of an effective Research Security Program. They know that without a facility security clearance, GTRI would not be able to perform on the 300+ classified tasks currently in house.

Maintaining this facility security clearance requires adequate (and hopefully even commendable or superior) compliance with a myriad number of government regulations pertaining to the protection of classified material. This compliance is only possible in a collaborative environment wherein the responsibilities for security are shared in the organization. In this teaming environment there are three major players: Research Security, GTRI Management and the Professional/Support Staff. Like on any effective team, each player has its own roles and responsibilities. GTRI is no different in this regard:

- The Research Security Department's role is to provide those services that lead to optimized solutions. These services must be professional, proactive, cost effective, consistently applied, and determined based upon maximum operational effectiveness and efficiency. The services should be consultative but provide for adequate audit processes to ensure that compliance is achieved.

- Management's role is to promote a strong Research Security posture by encouraging and supporting security policies, practices and procedures, by analyzing security requirements with each new classified task, by providing adequate resources and by surfacing security concerns in a timely manner so that they may be expeditiously resolved.
- The role of the individual GTRI staff member is probably the most important one. Each individual staff member working on a classified task has the responsibility to learn the security requirements related to that task, to conscientiously fulfill those requirements and to ask questions about security matters/guidance that are unclear.

As I mentioned in the opening paragraph, I am encouraged by the management and staff support for the Research Security program. My commitment is to continue the improvement of RSD's service level and processes so that we will be viewed as a valued partner in GTRI's Mission "to strive for technical excellence". I always appreciate receiving feedback as to how we are doing in reaching this goal.

We Want to Hear from You!

The GTRI Communications Office welcomes and looks forward to your feedback on our new employee newsletter – the *GTRI Insider*. Based on your input, we'll make sure that we focus on topics and stories that matter to you. If you have news, ideas, or suggestions to share concerning stories and features you would like to see in future issues, please let us know by completing and returning this form. You are also encouraged to nominate GTRI employees we can feature in the Up Close and Personal With... section of future issues.

You can fax completed forms to 404-407-9759 or send it via campus mail to Kathryn Knox in CRB 276A/mail code 0801. You can also e-mail your comments to GTRIinsider@gtri.gatech.edu

Please print or type:

Name: _____

Lab/Department: _____

Phone (day): _____ Cell (optional): _____

E-mail: _____

Comments/Suggestions/Ideas: _____

My suggestion for a future employee profile in the "Up Close and Personal With" section is:

Employee's Name: _____ Lab/Department: _____