The GTRI Connector

Did You Know...

A sneeze can travel as fast as 100 miles per hour.

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The trunk of the African baobab tree is sometimes as wide as the tree is high. The tree is pollinated by bats, and its blossoms open only in moonlight.

-- from *2210 Fascinating Facts* by David Louis

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GTRI Awaits ONR Decision on New Cost Structure

By Lea McLees, RCT

GTRI's cost accounting structure will change on July 1, with the exact structure depending on a forthcoming decision by the Office of Naval Research (ONR). The change could make our cost structure more flexible and familiar to our customers, enhance collaboration with resident instruction colleagues, and could fit GTRI's needs better than the current structure.

GTRI now operates under Office of Management and Budget (OMB) Circular A-21 using Allocated Project Level Costs (APLC) and Project Management Cost (PMC). In July, we will transition to either:

- Circular A-21/using the Project Allocated Technical Support (PATS) system

or, to a very different cost environment:

- Circular A122/(Attachment C) Federal Acquisition Regulations (FARs)/Commercial Cost Principles.

Georgia Tech has proposed that ONR approve the second option, FARs, for GTRI — Georgia Tech and GTRI leaders believe the FARs option is the better one for GTRI.

"GTRI operation under the FARs would enable us to be more responsive to our customers' needs for high-quality research," explains GTRI Director Richard Truly. "It would provide us with a management environment that would help us become more efficient and better understood by our customers and industry partners, as well as enhancing our collaborative posture with Georgia Tech."

A decision is expected in late April or early May.

Why Is A Change Necessary?

GTRI has operated under Circular A-21 since its inception. The regulations, intended for academic research environments, have never fit GTRI's contract-driven operations very well. A-21 assumes there is no way to identify the cost of research separate from resident instruction and student services costs. It relies on formulas — rather than actual costs — to determine what an institution can and cannot recover.

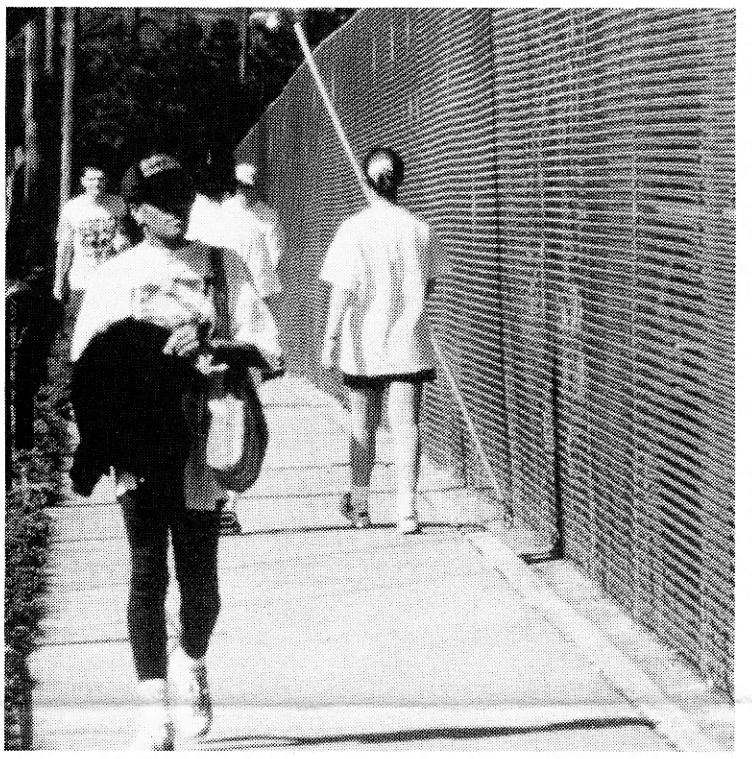
Changes made in A-21 regulations over the years have made GTRI's cost accounting structure unlike those of our competitors. Alterations in 1983, for example forced GTRI to charge sponsors overhead on items like airplane tickets and airline fuel, Walsh said. Even though the overhead rate had been reduced to produce approximately the same total recovery, GTRI experienced many problems with the charges on expenses other than personal services.

As a result — and as many researchers know — often government and industry sponsors object to our current cost structure, Truly notes.

"It is unique to GTRI, unfamiliar to them, difficult to understand, and appears unreasonable," he said. "A-21, for example, requires that universities charge the full overhead rate on materials, travel and a portion of each subcontract. In contrast, industry has the option of segmenting costs and developing lower administrative rates for these elements."

In 1993, a major revision to A-21 provided more rigorous limitations on direct charging. ONR directed GTRI to change from PMC and APLC to some other cost structure. A 1994-95 study by a team from the consulting firm Coopers & Lybrand, GTRI and Resident Instruction resulted in a proposal to stay under A-21 but use the PATS (Project Allocated Technical Support Costs) methods. Transitioning to PATS, however, would be very expensive because of the resulting higher rates and the limited

Continued on page 4



The security fences around campus remind us that less than three months remain until the 1996 Summer Olympics. Look for an article on GTRI's Olympics volunteers in the May Connector. (Photo by Stanley Leary)

Observed & Noted

This month we meet four members of the Personnel Support Team. *Turn to page 2 to read more about them.*

■

Deadlines are approaching for spending FY 96 funds. *For more information, see page 3.*

■

More Olympics questions and answers, along with an announcement of an Olympics facilities tour, are included in this issue. *Turn to page 3 for these articles.*

■

FutureNet is an Olympic legacy. *To read about what's been accomplished and view before and after photos, flip to page 4.*

■

Tom Horton is helping GTRI make contracting researcher- and industry-friendly. *Learn more about his work on page 5.*

■

The Safety Warning System (TM) uses radar detectors to warn of highway hazards. *Learn more about SEAL's work on this project on page 5.*

■

A proposal support group stands ready to help you. *Find out who to contact on page 6.*

■

More great graduates are listed in our April issue. *See who has finished school on page 7.*

■

David Philbin, Dara O'Neil and Mark Brothers have one thing in common -- they're all new employees! *Meet them on page 7.*

■

And finally, flip to the back page for the latest in professional, personnel and personal notes!

News & Notes

Meet the Personnel Support Team

When GTRI employees need assistance in the area of human resources, they know to turn immediately to the Personnel Support Team (PST) and its manager, Eunice Glover.

GTRI has "consolidated its human resources functions and put them under the umbrella of PST," Glover explains. "The team supports GTRI laboratories and service units in hiring, recruiting, payroll/timekeeping and training needs. PST also provides an employee database called HRIS [Human Resources Information Systems]."

PST works closely with Georgia Tech's Office of Human Resources and Payroll Office. The team's full-time staff of seven keeps GTRI at the forefront in its personnel endeavors. By "centralizing its human resources-related operations into one cohesive team, PST has enabled the research and management units of GTRI to focus their activities on sponsored research," Glover notes.

PST's functions are broken down into four specific areas, with each area focusing on a variety of related programs:

- **Employee Relations** — management/employee support, employee evaluation system, and compliance;
- **Staffing** — recruitment, job evaluation;
- **Salary Administration/Review** — payroll/timekeeping, HRIS; and,
- **Training/Development** — tuition reimbursement, management training support, and employee orientation.

Eunice Glover

Judy Harrison

Vicki Speights

Marianne Thompson

Eunice Glover, manager of PST, brings a wealth of knowledge and expertise to the PST team, focusing her talents on the continual growth and development of the unit within GTRI.

She transferred to GTRI in 1989, after spending two years working in the dean's office of the College of Architecture. Working closely with managers and lab directors to ensure that their personnel needs are met, Glover and her team provide hands-on assistance for the many unique employment-specific areas of GTRI.

Before coming to Georgia Tech, Glover spent more than eight years working for the U.S. government in the Alcohol and Drug Abuse Administration. She holds a bachelor's degree in sociology with a minor in management from Georgia State University, and plans to return there to pursue a master's degree in either management or human resources.

She and her husband, Hamilton, live in Southwest Atlanta. When she's not handling a myriad of activities for GTRI, Eunice's hobbies include reading and gardening.

Judy Harrison, secretary, has been with GTRI since August. Some of her duties include assisting the department manager with administrative functions, tracking departmental projects, and implementing new office procedures. Before she joined GTRI, Judy worked for two subsidiaries of the National Service Industries, first as credit manager and then as office manager. Because her father was in the military, Judy was born in Germany and has lived all over the world. "I grew up everywhere," she says. She and Ronald, her husband of 29 years, now live in Douglasville. They have two children and four grandchildren, all living nearby. One of Judy's favorite pastimes is her home computer. She also enjoys going to the lake, playing softball, and, of course, spending time with her grandson and three granddaughters.

Vicki Speights, a personnel assistant, joined PST as a Tech Temp in 1993. After six months, she moved to Payroll, where she worked for two years before transferring back to PST last September. Before coming to Georgia Tech, Vicki worked for a large furniture manufacturer for 10 years, first as an inventory control specialist and then as office manager. Vicki tracks paperwork for all personnel actions, coordinates timesheets, and maintains vacation and sick leave records. Her connection to Tech was

Continued on page 3

SELECTED MARCH 1996 AWARDS

Title	PI/Laboratory	Sponsor	Funded Amount
DTA Runstream Program Validation & Upgrade	Wasikowski, M. (AERO)	Air Force	225,000
Coordination and Technology Application Support	Stancil, C. (AERO)	SAIC	177,658
Eval. of Aerodynamic Characteristics, Performance & Stability of Smokin' Joe...	Englar, R. (AERO)	Competition Specialties	21,103
U. S. Postal Service Helicopter Support	Roglin, R. (AERO)	U. S. Postal Service	232,325
ASTS Helicopter Operation	Stancil, C. (AERO)	U. S. Dept. of Transportation	1,537,487
Task A3: Atlanta Short Haul Transportation System	Stancil, C. (AERO)	SAIC	668,285
Model-Scale Tests for Jet/Collector Interactions	Ahuja, K. (AERO)	Boeing Aerospace Co.	87,361
AN/ALQ-161 WFG EEPROM Modification Support	Strike, T. (ELSYS)	Air Force	75,000
TSLA Study for EC Test & Evaluation	Engler, H. (ELSYS)	Air Force	190,000
Spectra Solution Formation Studies	Kotliar, A. (EOEML)	Allied Corp.	50,000
Radio Station Analysis	Wilson, B. (ITL)	Army	$ 398,556
High Density Signal Source Pedestal Integration	Roberts, R. (SDL)	Manufacturing Technology Inc.	130,000
Advanced Airborne Interceptor Simulator (AAIS)	Roberts, R. (SDL)	Westinghouse	400,000
Radar Range & Instrumentation Design for the Submarine Sail/Periscope...	Scheer, J. (SEAL)	Analysis and Technology Inc.	121,520
EMC Testing	Santamaria, J. (SEAL)	Micromeritics Inc.	32,000
Add-On No. 2: Mobcap Apex FCR#1 Evaluation	Adams, J. (SEAL)	Dynetics Inc.	122,303
SA Scanner Integration	Asbell, O. (SEAL)	Scientific Atlanta Inc.	26,301
Electromagnetic Environmental Generating System	Clark, D. (SEAL)	Navy	311,400
Radar ECCM Flight Test Demonstration and Vulnerability Assessment Program	Morris, G. (SEAL)	Air Force	282,271
Conformal Aperature Velocity Sonar (CAVES) Concept Evaluation and Testing (U)	Caille, G. (SEAL)	Navy	600,000
Tri-Service Electronic Protection Program	Piper, S. (SEAL)	Air Force	200,900
AC-13OH Gunship Flight Test of Markl Passive Infrared Radiation Suppressor	Dimarco, J. (STL)	Air Force	145,000
Electromagnetic Modeling & Measurements	Kemper, P. (STL)	McDonnell Douglas Corp.	109,994
Extending the Utility of the IR Measurement Range	Swarner, W. (STL)	U. S. Dept. of Defense	49,994

Deadlines Approaching for FY 96 Funds

To meet the deadlines established by the Georgia Tech Purchasing Department for purchases to be paid from FY 96 funds, Material Request forms must be received in Supply Services by the dates indicated below (deadlines are earlier this year because of the Olympics):

Orders for technical/scientific supplies or equipment, regardless of monetary value	May 9, 1996
Orders under $10,000 for EDP equipment/software, not under statewide contract (with EDP approval attached, if required)	May 9, 1996
Orders under $10,000 for non-technical/non-scientific items, not under statewide contract	May 9, 1996
Orders for items on statewide contract, regardless of monetary value (orders for EDP equipment/software must have EDP approvals attached, if required)	June 5, 1996
Orders $499.99 and under	June 7, 1996

The above deadlines apply to all purchases being charged to state funds (E, G, H, I, J, N and P accounts) and to purchases charged to sponsor funded accounts which require order placement this fiscal year. Items ordered on "D" accounts which are encumbered but not expended by June 30, 1996 will be reclassified to appropriate lab accounts under GTRI's new financial structure for expenditure during FY 97.

For EDP guidelines, contact Linda Brown in the Office of Information Technology at 894-2387.

When purchasing items not on statewide contracts, please provide complete specifications.

Labs/departments should avoid "bid only" requests unless they reasonably expect funding to become available in the current fiscal year.

MR's should be submitted as early as possible, especially in the case of complex acquisitions. If you have questions regarding the above deadlines, please contact Martha Farley at 894-2399.

PST ***From page 2***

formed early in life; she attended O'Keefe High School (now GTRI's O'Keefe Building) in the 8th and 9th grades. She lives in Lithia Springs with her husband Larry and their two daughters, Laura, 13, and Stacie, 9. When she is not working, Vicki enjoys reading, movies, music and spending time outdoors with her family.

Marianne Thompson, administrative assistant-payroll coordinator, has been with GTRI for more than 14 years. She works to ensure that all GTRI employees get paid correctly and on time. She also tracks vacation and sick leave, coordinates tuition reimbursement and disperses paychecks. Before coming to Tech, Marianne worked in the retail industry and as a counselor in an employment agency. She grew up in New York but has lived in the South for 28 years and considers herself a southerner. Marianne has four children (her son Dan graduated from Tech in 1991) and one grandson. A member of the Conyers Kennel Club, Marianne spends most of her free time going to dog competitions with her daughter, Kay-C, who shows shitzus. Her other hobbies include reading, crafts and traveling. "I love meeting new people and exploring new places," she says.

GT Scholarships Available to Children of Tech Employees

Is your child a Georgia Tech undergraduate? If so, the Georgia Tech Faculty Women's Club may be able to help with tuition expenses.

The club offers scholarships to Tech undergraduates who are the children of Tech employees. Scholarships range from $500 to $1,500, and are based on financial need and academic achievement.

The club also accepts donations for the fund. Contributions are 100 percent tax deductible.

For more information on applying or donating, you may call Margo Dixon at 872-0183.

Tour the Olympics Facilities!

An open house for the Olympic Facilities is scheduled for May 7. For more information, call Georgia Tech's Olympic Planning Office at 894-4610.

Countdown to 1996

I heard a rumor that if some group/person threatens the Village during the Olympics, all employees will have to be strip searched before being allowed on campus. Is this true?
This rumor is false. If a threat were posed to the Village, all persons entering would be checked with a hand-held detector, similar to those used in airports. Strip searching will not happen under any circumstances.

I understand that the I-75/85 exit ramps to 14th Street and North Avenue will remain open during the Games to allow access to the campus and to satellite parking lots. Is the northbound exit ramp, which serves 10th Street as well as 14th Street, included in that?
The northbound exit ramp to 10th Street and 14th Street will remain open. Employees assigned to a parking lot on 10th Street will be given a vehicle credential that will allow them access to 10th Street.

Will each shuttle go to all entry points on campus, or just a few?
Employees will be assigned to parking lots based on the building they work in. Shuttles will go to the entry control point(s) for that zone. For those employees whose buildings are not near an entry point, an internal shuttle will be provided to take them from the entry point to their building. However, shuttles will not operate between zones.

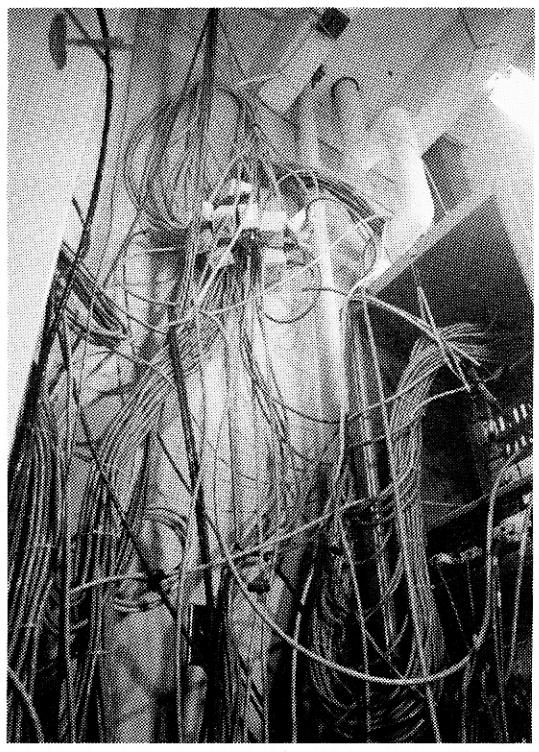
How much time should we allow ourselves to get from the satellite parking lots to our offices during the Olympics?
That depends. Some employees will be able to walk from the satellite parking lots to their entry control point, others will have to take a shuttle, and some may need to take an internal shuttle from their entry control point to their building. A parking transition plan will be published in May which will provide you with more information.

News & Notes

Focus on Research

FutureNet: An Olympic Legacy

By Joey Goddard, OCA



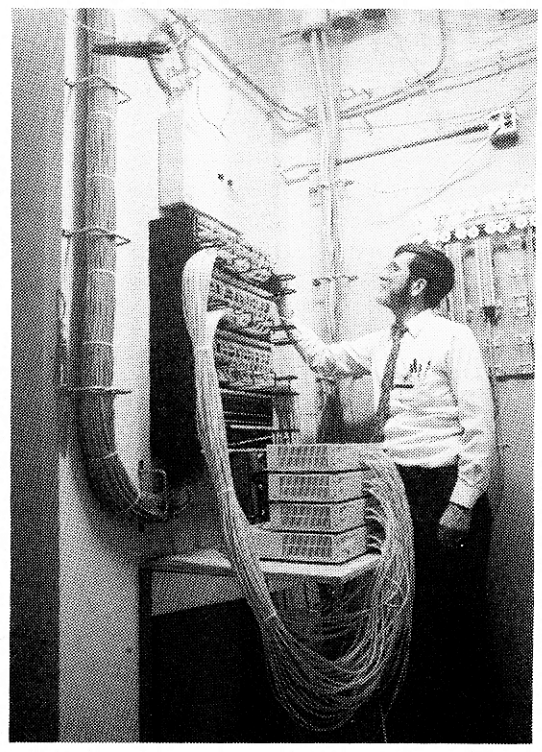


Photo to left: One of 11 wiring closets in CRB before the FutureNet wiring project. Failures in this closet could have affected half the building and take hours or days to find and repair. But now...

Photo to right: ...after the FutureNet wiring project, OIT can electronically monitor the health of each port from the Rich Building by interrogating routers in each closet. Tom Brown, AIST manager, inspects work on cables that connect routers to a patch panel on the wall. (Photos courtesy AIST)

GTRI is already realizing the benefits of one Olympic construction project.

Phase I of FutureNet, a system of fiber optic cable and high-capacity copper that provides state-of-the-art communication capability, is complete. FutureNet brings "next generation" voice, data and video technology to campus. "This system is faster, more reliable and makes it easier to diagnose problems," said Tony White (AIST), the FutureNet coordinator for GTRI.

The end of Phase I marks the connection of the entire campus to a new enhanced fiber backbone, which consists of approximately 1,800 miles of fiber stretching to almost 130 buildings. It also included the installation of a new network within 22 buildings on campus, three of which are used mainly by GTRI.

FutureNet began when planners in the Office of Information Technology (OIT) realized that Olympic sponsors would be laying miles of fiber optic cable for the Olympics. Rather than install the network on a temporary basis to a small portion of Tech's infrastructure, OIT, in an agreement with the Atlanta Committee for the Olympic Games (ACOG), arranged to have the entire campus rewired.

The price tag for Phase I of the project is valued at over $4 million. However, most of the cost was offset by contributions from ACOG and its sponsors, AT&T, BellSouth and Scientific Atlanta; private partners Sun, CISCO and Cabletron; and a special allocation from the state legislature. The rest of the tab was shared by various campus organizations and academic units.

The FutureNet system offers many advantages over the old network. It uses category 5 twisted-pair cable, which can be support network speeds from today's 10 megabits per second (Mbps) up to 155 Mbps. And with an upgrade to the system's electronics, the fiber can support speeds as high as 2.6 gigabits per second (Gbps).

"The backbone fiber and intra-building fiber and copper will support all known and anticipated network capabilities," said John Mullin, director of Operations and Engineering for OIT.

Offices, classrooms and labs will also benefit from an increase in bandwidth, with easier access to the network and increased network performance.

"This is very important as the demand for network resources to support multimedia applications, video and the WWW skyrockets in the academic, research and business communities on campus," Mullin said.

Troubleshooting is also made easier through the use of "smart electronics." When a problem occurs, the network routers are able to report the exact location of the failure. The network can be controlled and monitored from the Rich Building.

"OIT has guaranteed a one-day response time on any network problems up to the wallplate," White said.

Nevertheless, Mullin believes that this system will need very little upkeep.

"This is a much more stable environment which has far fewer maintenance problems," he said. "The problems which do occur are easier to find and fix."

White is working on a network usage policy that will ensure that the system's capabilities are fully utilized. "We want flexibility, but only careful management will allow the network to do what it's supposed to do," White said.

The policy will limit access to the network facilities in order to maintain the integrity of the system. "Before, anyone could throw a cable over the wall. The network usage policy will require that any changes meet specifications and be documented," White added.

One of the biggest advantages of FutureNet is that it will provide a consistent standard for the entire campus. According to Mullin, all current and future construction projects will be required to meet the FutureNet standard.

Phase II of FutureNet is scheduled to begin after the Olympics. However, the exact starting date will be determined by the system's requirements and the availability of funding.

Cost Structure ***From page 1***

recovery on capped contracts. In addition, GTRI would still be subject to future changes in the already ill-fitting A-21 — changes that, while deemed appropriate for the typical university environment, would have detrimental effects on a contract research institute.

A 1995-96 study identified FARs as a potential alternative. GTRI submitted a FARs proposal to ONR, and is now waiting for ONR's response.

Advantages of Changing Structures

How will a cost structure change make a difference? If FARs is chosen, it would allow us to use the commercial Federal Acquisitions Regulations for cost estimation, accumulation and reporting on all programs, just as our industrial and private not-for-profit competitors do. GTRI would be allowed to collect costs we can't collect now, such as the cost of internal research and development (IR&D). Having IR&D as an allowable cost would be an incentive for investing in new technology innovations internally, Truly says.

"A growing but focused IR&D program would assist not only GTRI's customers — it also would facilitate additional collaborative opportunities with the academic faculty, and research opportunities for graduate students," he said.

Despite all the changes, one important association would stay the same: GTRI would continue to be part of Georgia Tech. No spin-off from Georgia Tech is involved in the change. We will still be Georgia Tech employees, be part of the retirement systems we have now, and get our paychecks from the business office.

"The two most important words in Georgia Tech Research Institute are 'Georgia Tech'," Truly has said many times.

What's Next?

GTRI Fiscal Services is leading preparation for the change — which will include rewriting software, setting up accounts and billing, rebudgeting projects, revising worksheets, forms and procedures, and training affected employees to use the new system. MAPS will help develop cost impact statements for the government. AIST will revise the Oracle database to work with a new system. Changes in individual time reporting will be developed, as well.

"The FARs implementation is complex, costly and difficult — but assuming ONR approves our proposal to change, we can do it," Truly said. "There are several long-term strategic advantages, all of which will strengthen GTRI's ability to deliver high quality, cost-effective research products to our customers."

Home of the 1996 Olympic Village
Georgia Tech Research Institute

Focus on Research

Making Contracting Researcher- and Industry-Friendly

By Joey Goddard, OCA

GTRI has a new way of looking at industry contracts. Tom Horton, manager of industrial business development, has developed a marketing plan designed to make the contracting process more "friendly" to researchers and industry.

As the government's research dollar continues to shrink, contracts with industry are vital to maintaining GTRI's current level of research expenditures. Although the potential industry R&D market is very large, only a small percentage of GTRI's funding currently comes directly from industry research contracts.

"There is a perception that contracting with industry is difficult — but most of these obstacles can be easily overcome by focusing our efforts and simplifying the process," Horton said.

The first step in the marketing plan is compiling an industry database that will store information on past and ongoing industrial activity, Horton says.

"Using the database, we can know what businesses GTRI has worked with on past projects," Horton said. "Therefore, it will be easier to maintain those relationships and build on them. In addition, we can assist researchers starting new contacts by making them aware of past work with their potential sponsor."

The database, which is being developed by AIST, will be used initially by the Advanced Programs Office's (APO) business development staff, but will be open eventually to all of GTRI. "Having active industry projects on-line and a protected list of current contract development activities available will ensure coordination of contract development activities," Horton said. He believes that researchers will be more comfortable sharing information on contracting leads in this protected environment. "The information will be protected, while still allowing us to give them any historical contracting information that would be helpful," said Horton.

In addition, Horton plans to work with the corporate liaison office, the Georgia Tech Foundation, the Alumni Association and various academic units to ensure that our efforts are coordinated with other campus activities. "Coordinating with different organizations on campus will allow us to find businesses that are already friendly to Georgia Tech," Horton said.

Another goal of this program is to simplify the contracting process. To this end, GTRI, working closely with the Georgia Tech Research Corporation (GTRC), the Office of Contract Administration (OCA), and Legal Affairs, has developed a new short form contract for industry sponsored projects. Specific policies and procedures for its expanded use are being prepared and include a plan to raise the ceiling, or maximum contract value, for short form standard letter contracts from $5,000 to $40,000. Raising this ceiling will allow more researchers to use the short form contract and spend less time in contract negotiation. Furthermore, GTRC has established and documented a new advanced payment criteria matrix which will clarify the advanced payment policy for industrial contracts. This matrix determines the degree of financial risk that will be assumed by each unit and GTRC when working on industry sponsored projects. "Where there was no written advanced payment policy before, we now have a clear, concise plan that lets researchers know what to expect," Horton said.

A training program to help researchers better understand industrial contracting is scheduled to begin late this summer. New personnel will be trained on general contracting procedure, with special emphasis on industrial contracts. Existing employees will have the opportunity to attend a shorter version of the training sessions which will focus on the recent changes in GTRI's approach to industrial contracting.

For more information, you may send e-mail Tom Horton at tom.horton@gtri.gatech.edu or call 894-0239.

Safety Warning System Uses Radar Detectors to Tell of Highway Hazards

By John Toon, RCT

Technology already widely used by American motorists is the basis for a low-cost safety warning system that would inform drivers of highway hazards such as traffic accidents, approaching emergency vehicles, construction delays or visibility problems.

With support from a consortium of consumer electronics companies, GTRI researchers have developed a transmitter and messaging system capable of sending a wide range of emergency warnings to motorists using advanced radar detectors. The Safety Warning System (TM) will also provide a general warning to the estimated 20 million drivers using older radar detectors not capable of displaying text messages.

"Intelligent transportation systems planned for the future will improve highway safety by providing drivers with information about the hazards ahead of them, but it's going to be years before such systems are implemented," said Gene Greneker (SEAL). "The Safety Warning System will provide a sophisticated warning capability today and serve as a stepping-stone to the systems of the future."

The key to development of the system was agreement by four leading radar detector manufacturers to use a common technique for sending emergency information and a standard set of warning messages compatible with National Highway Traffic Safety Administration guidelines.

The new generation of "smart" radar detectors includes a built-in liquid crystal display capable of displaying up to 64 characters. When such a detector receives a safety message, it first sounds a special tone to alert the driver before displaying the message. A second message can also be sent and displayed with the first, so the system could both warn of a hazard and tell the driver of a reduced speed limit.

Because the transmitter also sends out microwave signals on the K band, drivers using older radar detectors would still be alerted to a traffic hazard, though they could not be told thespecific nature of it.

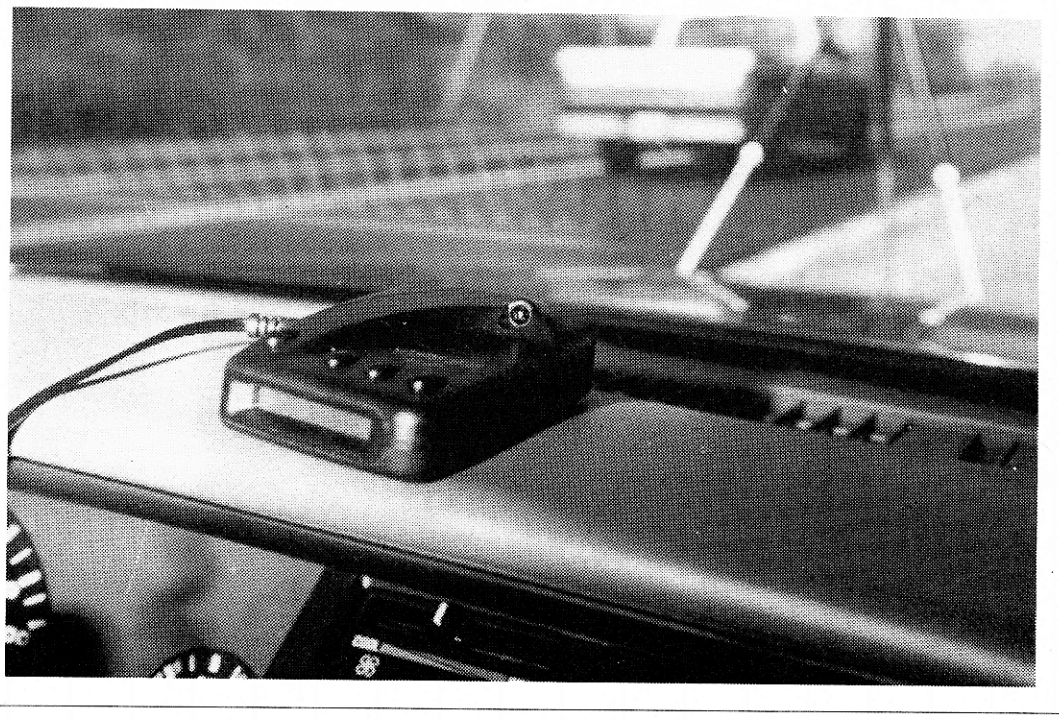
The consortium of electronics companies, known as RADAR, has filed a patent application to protect the technology.

Transmitters would be located on police and other emergency vehicles, and on construction equipment, bridges, existing overhead sign warning systems and other fixed sites. Portable transmitters could also be moved to locations wherever needed.

"Every police car one day will have one of these," Greneker predicted. "When the police officer turns on the blue lights or siren to begin a pursuit or respond to an emergency, the transmitter would send out a message alerting motorists. At an accident site, the officer would use the transmitter to warn oncoming cars."

GTRI has built and tested one transmitter

Continued on page 6



Radar detectors like this can be used to alert motorists to traffic accidents, approaching emergency vehicles, construction delays, visibility problems, and more. (Photo by Gary Meek)

News & Notes

Proposal Support Group Formed

Lee Hughey and Carmen Daniels recently joined the staff of the Advanced Programs Office (APO) to form a new Proposal Support Group. They transferred from the Administrative Information Systems Team (AIST) and report to Jim Cofer.

The Proposal Support Group will assist GTRI staff in preparing proposals. AIST already has begun developing information systems on research project summaries, standard-format biographical sketches, and write-ups on research capabilities, centers, facilities, laboratories, support functions and related boilerplate material from which researchers can pull the information they need.

This new group will complement APO's other functions, which include providing support to multi-lab pursuits in the form of team leadership, teaming agreements, funding, cost proposal preparation, red team reviews and operation of a proposal war room. This transfer will reduce the number of contacts proposal writers and others must make to get basic information, and will further enhance GTRI's ability to produce winning proposals.

In addition to maintaining on-line production databases that provide research project summaries and biosketches, the group will develop more effective information delivery systems for the current databases, and bring the boilerplate files into a searchable database system. The new unit will have a Proposal Support Advisory Group with representation including senior lab researchers, AIST and APO.

Lee Hughey, who will serve as group leader, is in CRB Rm. 323 and can be reached at 894-9621 or at lee.hughey@gtri.gatech.edu. Carmen Daniels is in CRB Rm. 316 and can be reached at 894-0495 or at carmen.daniels@gtri.gatech.edu.

Former GTRI Researcher Performs at Symphony Hall

A former GTRI researcher and Georgia Tech alumnus who traded the laboratory for the concert stage performed in Atlanta in April.

Enrique Chia, MS Met '67, Ph.D. ChE '75, performed cuts from his recordings in Atlanta's Symphony Hall on April 6, accompanied by a group of musicians from Miami.

Chia, who also taught at Georgia Tech and was a GTRI researcher from 1987 through early 1990, has recorded 17 CDs of piano favorites for two companies—an independent label and Polygram Records. And he did all that in just four years.

Before making music a full-time job, the Cuban-born Chia was a metallurgist. He holds 46 patents for improving the manufacturing process for the wires that connect computer components. He also has published 66 works on the subject.

Radar

From page 5

system, and will be building others as part of larger-scale testing. RADAR, which includes manufacturers B.E.L.-Tronics, Ltd.; Sanyo Technica USA, Inc., Uniden America Corp. and Whistler Corp., is pursuing efforts to commercialize the transmitter system.

Since 1991, the Federal Communications Commission (FCC) has allowed use of unattended radar transmitters to trigger radar detectors and thereby warn drivers of hazards ranging from highway construction zones to road maintenance. Though these "drone" systems cannot broadcast specific warnings, they have been considered useful for improving highway safety.

"At least two studies have shown that drone transmitters capable of setting off the current generation of radar detectors are effective at slowing traffic in construction zones," said Janice Lee, president of RADAR. "We believe this technology has much untapped potential. Enhanced transmitters, when coupled with 'smart' radar detectors, will let the driver differentiate between various types of road hazards."

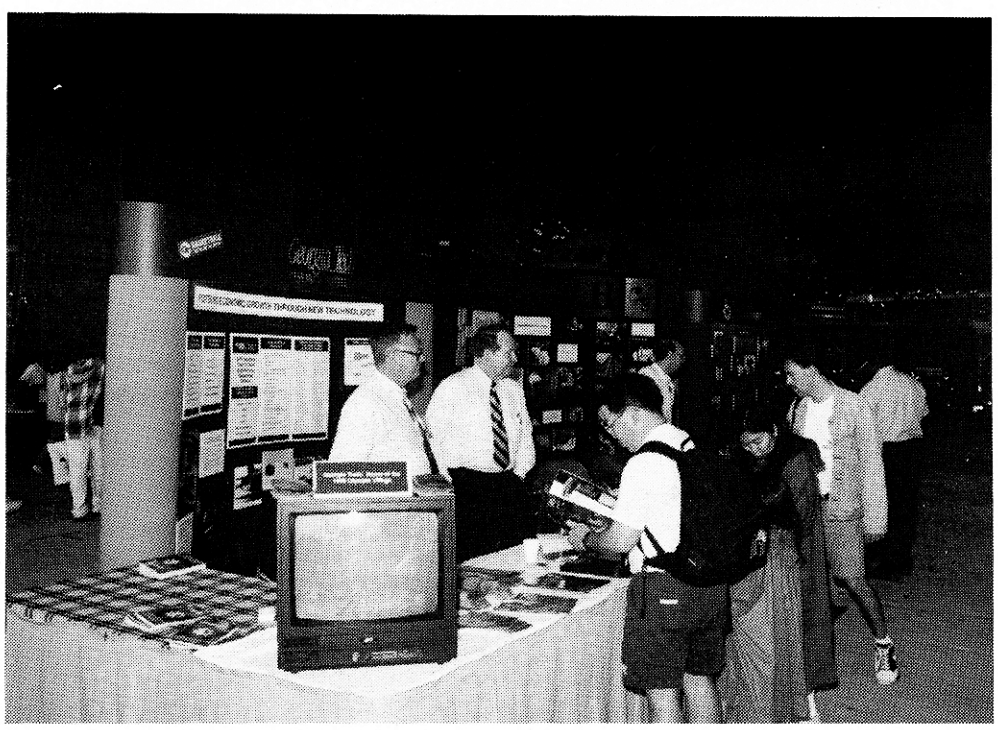
The transmitter system developed by Greneker and Bruce Warren, with help from engineers at the industry companies, broadcasts the safety warning message using a binary encoded modulation technique received and displayed by the new K-band detectors. Because the 64 standard warning messages are preprogrammed and stored in the detector's memory, the simple code is all the receiver needs to determine which message to display. The seven-bit code can be repeated as often as ten times a second, boosting reliability.

"You don't have to transmit every letter of the message, so there is plenty of opportunity to receive the warning," Greneker noted.

Customized warning messages can also be sent using a keyboard and simple computer-based menu system. Messages on unattended systems could be changed remotely through a dial-up system. Programming functions allow the system to broadcast during certain times of the day, to operate only when vehicles are approaching, or to turn themselves on only after sensing a hazard such as a bridge failure or low visibility.

RADAR has petitioned the FCC to allow higher transmitting power that would increase the range of the system and enhance the ability of moving emergency vehicles to broadcast warnings. With present power levels, the system will provide a warning at least one mile ahead of the highway hazard.

Greneker believes the technology developed for radar detectors could also be applied to other wireless communication needs, expanding the market for both transmitter and receiver manufacturers.



Bob Mobley (left) and Jim Cofer of APO staffed the GTRI information booth at a March 16 open house at Warner Robins. (Photo Courtesy Richard Odom)

To My Former GTRI Colleagues

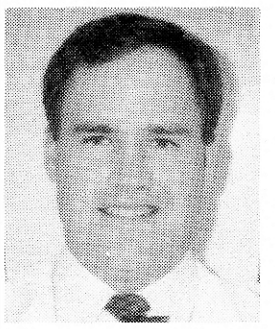
The death of my wife, Joan, on April 5 was relatively sudden, but mercifully painless for her. I'm still learning to cope with my own grief, but meanwhile I am comforted to discover how many of you still remember her from her more active times.

I do plan to be in direct touch with everyone who has communicated individually. But let me use this means to thank all of you as a group for sending the beautiful flowers which enhanced the altar at her memorial service on Sunday, April 14. I am truly grateful for your thoughtful gift.

Don Grace

David Philbin

Dara O'Neil



Mark Brothers

GTRI Greetings

Welcome to some of our newest employees!

Ten Good Things We Know About David Philbin

1. David has been a graduate research assistant in the Information Technology and Telecommunications Lab since October 1995.

2. His specialty is instructional design, and he is helping to develop a computer-based training system for the Army.

3. He also is working toward a Tech master's degree in engineering psychology.

4. Before coming to GTRI, David worked with human interface technology for AT&T.

5. David graduated with honors from the University of Massachusetts in 1992 with a bachelor's degree in psychology.

6. After working on an assembly line one summer, he decided to pursue engineering psychology.

7. David grew up in Acton, Mass., a small town near Boston.

8. He lives with his girlfriend, Lori, a software developer, and her cat, Monster.

9. The two have "big plans" to renovate their house in Home Park.

10. In his spare time, David likes to sample Atlanta's nightlife and play video games.

Ten Good Things We Know About Dara O'Neil

1. Dara joined the Electro-Optics, Environment and Materials Laboratory as a student assistant in 1991.

2. She was hired as a research associate in the Communications and Training Technology branch of EOEML in December 1995.

3. In 1994, Dara received her bachelor's degree in science, technology and culture from Georgia Tech.

4. She graduated with honors and had three minors: French, sociology and international affairs.

5. Before graduation, Dara spent several months in Korea teaching English as a second language. She returned to Asia after graduation to teach English in Taiwan and Thailand.

6. She is currently pursuing a master's degree in public policy from Tech and would like to get a Ph.D.

7. Because her mother is Irish, Dara moved back and forth between Georgia and Ireland while growing up.

8. Her sister, Eliesh Lane, works as a research scientist in EOEML.

9. When she is not working or studying, Dara enjoys mountain biking and camping.

10. Dara is also the proud owner of a 6-month-old puppy, Cidona.

Ten Good Things We Know About Mark Brothers

1. Mark began working for the Signatures Technology Lab in November 1995 as an office automation specialist.

2. His work involves translating data from a printed form into an electronic form.

3. Mark has a bachelor's degree in business administration from The Citadel.

4. Before joining GTRI, he spent six years in the Air Force as a navigator.

5. A Gulf War veteran, Mark navigated KC-135s in support of U.S. troops in Saudi Arabia.

6. Mark flies in the Air National Guard, Savannah Unit, two weekends each month.

7. He grew up in Greenville, S.C., and still has family in the area.

8. Mark lives in Kennesaw with his wife of one year, Karen.

9. In his free time, Mark enjoys playing softball and golf.

10. He also runs the Peachtree Road Race every year.

"Olympic Friendship Forest Park" Promotes U.S./Vietnam Friendship

By Maggi Harrison, AERO

An "Olympic Friendship Forest Park" will grow in the Olympic Village on the Georgia Tech campus, before during and after the Games.

Georgia Tech and Charlie Battle, director of the Atlanta Committee for the Olympic Games' (ACOG) International Relations Committee, invited Earth Stewards Network Intl. to plan 20 Nutall oak trees in the park. They are growing across from the Aquatics Center, close to the Manufacturing Related Disciplines Complex, and are marked by a bronze plaque provided through Trees-Atlanta. Atlanta's Vietnam Reconciliation Group co-sponsored the project.

The March 23 tree-planting ceremony was a symbolic first step in a program to honor Vietnam's participation in the Olympic Games, as well as to highlight landmine problems throughout the World. Starting in July, in Quang Tri Province (central Vietnam), landmines will be removed from around the old U.S. Khe May Base. In November, thousands of trees will be planted at that location in a Friendship Forest Park by 35 to 40 international citizens working with 35 to 40 Vietnamese citizens.

Among those attending the ceremony at Georgia Tech were: U.S. Congressman John Lewis; Vietnam's Deputy Ambassador to the United States, Ha Hey Thong, who flew here from Washington D.C. with his family and staff; and representatives from Earth Stewards Intl. and the Atlanta Vietnam Reconciliation Group.

Maggi visited Vietnam with the Friendship Force about two years ago.

More Great Graduates

Derek Cook (ITL) earned a bachelor's degree in electrical engineering from Georgia Tech. He graduated in March with highest honors. A co-op since 1991, Derek began work with Ericsson, Inc. on April 1.

Bill Carter (SEAL) completed a master's degree in environmental engineering from Georgia Tech in March. A research engineer in the Underwater Research Program Office, he works on underwater acoustics. As part of his requirements, he wrote a special research project report on "Phytoremediation of Explosives-Contaminated Groundwater." Michael Saunders was his adviser, and Spyros Pavlostathis and Myrna Jacobson were members of his reading committee. All are faculty in the School of Civil and Environmental Engineering. Bill plans to continue working at GTRI, shifting the emphasis of his work to environmental engineering.

Focus on Folks

Focus on Folks

The *GTRI* Connector
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Professional Activities

Electro-Optics, Environment and Materials Laboratory

Mike Harris, **Marsha Moore** and **Chris Erichsen** organized and hosted a workshop on Microwave Packaging Materials as part of EOEML's program on High Density Microwave Packaging (HDMP) for Next Generation Aircraft and Space-based Phased Array Radar. Sixty representatives from DoD and industry attended the workshop at the Manufacturing Research Center (MARC) Feb. 29 - Mar. 1. Advanced materials used in a new class of solid state transmit/receive modules being developed by Hughes, Texas Instruments and Westinghouse, were discussed.

Mike Harris presented a paper on "Factors Limiting the Reliability of Pseudomorphic High Electron Mobility Transistor (PHEMT) Materials, Devices and Circuits" at the Government Microcircuit Applications Conference (GOMAC) in Orlando, Fla., Mar. 18-21.

Michael Lowish was an invited speaker at the Governor's Pacific Rim Safety and Health Conference in Honolulu. He spoke on "Welding Safety Considerations."

Michael Lowish and **David Jacobi** were asked by the OSHA Area East Office to present a "Confined Space Entry" seminar as part of a special emphasis outreach program for Georgia's poultry industry.

Bob Newsom (EOEML), **Lou Circeo** (Architecture), and Dennis Bickford (Savannah River Site) visited the All-Russian Institute of Chemical Technology and PlasmTech Corp. in Moscow the week of Mar. 11. They inspected a Plasma Induction Cold Crucible Melter (PICCM) being delivered to Georgia Tech on an ERDA contract with Savannah River site. The PICCM is an innovative hybrid processing melter system that will be evaluated by the Georgia Tech Plasma Application Research Facility (Construction Research Center/GTRI-EOEML) for Savannah River Site.

Nile Hartman and Bob **Schwerzel** attended a DoD Photonics Conference in McLean, Va., Mar. 26-28 and discussed new project opportunities with several key people within DoD. This trip was made possible by support from the Law Enforcement New Initiatives Program.

Steve Hays was the invited speaker for the Construction Education Foundation of Georgia's Safety Awards luncheon on Mar. 22. He also presented a Construction Safety seminar to Georgia-Pacific Corporations' Pulp and Paper Division in Raleigh on Mar. 5.

Charlene Bayer was an invited speaker at the Southern Aerosol Technology Conference in Atlanta on Mar. 21. She spoke on "Aerosol Characterization Research."

Steve Hays and **Kirk Mahan** conducted two single day OSHA Update Sessions in Atlanta and Macon recently. Approximately 300 people attended these two sessions, sponsored by the Georgia Manufacturing Extension Alliance.

Vicki Ainslie and **Eliesh Lane** conducted annual refresher training for lead-based paint supervision on Mar. 13 and advanced asbestos supervision on Mar. 14 for Robins Air Force Base in Warner-Robins, Ga.

Bob Schmitter and **Myrtle Turner-Sippio** conducted annual refresher training for advanced asbestos supervision on Mar. 14 and asbestos inspector/management planner on Mar. 15 for Keesler Air Force Base in Biloxi, Miss.

Margie Brown and **Leigh McElvaney** were recognized at the Southeastern Safety, Health and Environmental Conference for their outstanding contributions to the success of this conference in 1996 and in previous years.

Information Technology and Telecommunications Laboratory

Janet Leininger (IPA to the U.S. Army Research Lab) attended the International Federation for Information Processing "Office of the Future" conference at the University of Arizona in Tucson, April 9-11. Leininger advises and mentors Army installations on integrating electronic meeting support (EMS) into their operations.

Personnel News

New Hires

ITL welcomes **Brian Barclay**, Grad. Temp; and **William Stark**, Research Engineer I. Arlington Research Group welcomes **Lynne Castle**, Project Director I. AIST welcomes **Nathan Chandler**, Student Assistant; and **Robert Lester**, Computer Services Specialist I. EOEML welcomes **Junfu Chen**, Research Scientist II; **Katherine Fox**, Student Assistant; **Tracey Guerin**, Graduate Assistant; **Melinda Higgins**, Research Scientist II; **Rahul Kartha**, Student Assistant; and **Juan Smith**, Student Assistant. RCT welcomes **Amanda Crowell-Woodrum**, Information Specialist II. AERO welcomes **Dawn Evangelista**, Student Assistant; and **Stephen Williams**, Temp. Student. ELSYS welcomes **Steven Klivansky**, Graduate Research Assistant. SEAL welcomes **Carol Minn**, Student Assistant; and **Anna Pirkle**, Student Assistant. Advanced Projects Office welcomes **Mary Wall**, Student Assistant. SDL welcomes **Richard Brown**, Research Engineer I; and **David Kuechenmeister**, Research Engineer II.

Moving On

Keith Aberegg (SEAL); **John Bright** (AERO); **Cathy Clark** and **Howard Tatum** (EOEML); **Joyce Jones** (RSD); **Derrick Whittle** (ITL) are moving on.

Transfers

Luther Ward, Tech Temp, has transferred from SDL to the Aerospace Laboratory effective March 28.

Personal Notes

Cradle Roll

Dee and **Rudy Benz** (EOEML) welcomed a daughter, Ciara Marie, on Mar. 19.

Cindy and **Ashley Slappy** (SDL) welcomed their first child, Rachel Lynn, on April 1.

Sandy Kirchoffer (Support Services) welcomed a grandson, Richard Michael, on Feb. 29.

Charlie Crawford welcomed a grandson, Luke Alexander, on April 1.

Our Sympathy

...to retired GTRI Director **Donald Grace**, whose wife, Joan, died April 5.

Tech Author Seeks Information on Women and Stress

For a book on how women from different ethnic backgrounds cope with stress, Georgia Tech associate professor Edith Blicksliver is seeking short stories, poems, essays and biographical sketches.

The book, The Ethnic American Woman: Problems, Protests, Lifestyle was first printed in 1979. Its more than 100 letters, essays, autobiographical accounts and transcribed oral accounts include works by such noteworthy women as folk singer Joan Baez Harris, poet Gwendolyn Brooks and Pulitzer Prize-winning author Alice Walker.

Blicksilver is seeking new material for the book's sixth edition. She also teaches a class in the School of Literature, Communication and Culture called "The Immigrant/ Ethnic Experience" (English 3786).

Submissions should describe how women have coped with stressful situations such as disappointment, divorce or the loss of a loved one. They should include specific ways in which culture, traditions and ethnic origins have helped or hindered recovery.

Submissions should be three to five pages long, and student work is welcomed. Send to: Edith Blicksilver at the School of Literature, Communication and Culture, Georgia Institute of Technology, Atlanta, Ga., 30332-0165.