



RLE

undercurrents

Volume 5, Number 1 • Fall 1991

A Newsletter for the RLE Community at MIT



Fiscal Officer Donald F. Duffy will mark 30 years with RLE in 1992. (Photo by John F. Cook)

STRIKING A BALANCE: RLE Fiscal Officer Donald F. Duffy

"This was supposed to be a temporary job," RLE Fiscal Officer Don Duffy laughs as he contemplates his approaching 30th anniversary with RLE on March 6, 1992. A 1960 graduate of Boston College with a degree in Industrial Management, Don was an electronics buyer at Dunn Engineering in Cambridge when he was laid off in 1962. Ralph Sayers, RLE's Administrative Officer, offered Don an administrative assistant position with the Fiscal Group in Headquarters, then located in MIT Building 26. Facing unemployment, and with his wife expecting their first child, Don accepted Sayers' offer, but promised himself that it would only be temporary until he found something better in industry.

Much to his surprise, Don liked working in RLE. On his third day, he received an unexpected visit from the late Professor Norbert Wiener, the first MIT faculty member whom he was to meet. According to Don, Wiener had a commanding, professorial air about him, wearing a well-tailored suit and sporting a goatee and an expensive cigar. But Don quickly relaxed when Wiener began to chat amiably with him about his scientific work. "It was a nice experience," Don recalls. "All the professors I met in RLE were such down-to-earth, friendly people. The work environment was relaxed and pleasant. So, I decided to stay." RLE appreciated Don, too, and within six months, he was promoted to Assistant Fiscal Officer under Paul Smith.

The model for academic research in the 1960s was the large block grant, with the laboratory director serving as principal investigator and with the faculty working on smaller projects within the grant. Don remembers, "Building 20 was hopping with experiments. Everything was built from scratch. Twelve machinists, three glassblowers, four stock clerks, and numerous technicians were kept going full time." For Don, this meant fewer proposals to process and fewer accounts to oversee, but there was more hands-on tracking of

the many expenditures within those accounts. In those days, MIT's accounting data gave little detailed information, and Don spent much time breaking out large expenditures that were lumped under single object codes in the large block grants. To ensure accurate reporting and projecting in this environment, tight internal controls were extremely important. Many of RLE's manual financial systems developed in 1946 are still in place today and have served as models for other MIT labs. Standing the test of time, these excellent systems provide a firm base as Headquarters continues to automate its financial operations and to set high standards for account management.

When Don became RLE's Fiscal Officer in 1975, the research environment had already begun to change. Large block grants gave way to proposals submitted by individual faculty for independent research projects. The number of proposals and project accounts increased dramatically as faculty adapted to this new mode to secure funding. This trend has continued to the present day with faculty becoming more entrepreneurial. As federal guidelines began to tighten up, accountability for expenditures under federal research awards

continued on pg. 2



Donald, Sr. (port side, third from bow) and Donald, Jr. (port side on the bow) shoot the rapids on Maine's Penobscot River.

Headquarters Surges Ahead With Computer Automation Projects



In its continuing efforts to better serve the RLE community and modernize the lab's administrative operations, Headquarters staff announces the following updates on computer automation:

Fiscal Computing. The RLE Fiscal Group is producing important financial information and analysis using both the laboratory's mainframe and personal computing resources, and has successfully integrated the Institute's on-line data with RLE's own SQL databases. Major applications include projecting research volume, generating RLE's annual budget, and tracking research assistant appointments. Software products using OS/2 have also been created for proposal development and on-demand financial reporting. Work is underway to design a mainframe-based monthly financial reporting system for all RLE research projects. A demonstration system is being tested with the goal of implementing laboratory-wide reporting. For information, please contact William H. Smith (3-2529).

Document Room On-line Catalog. The RLE Document Room is pleased to announce that its on-line catalog is up and running smoothly. Over 3,400 items, including the book and journal collections, are accessible through an easy-to-use PC computer program. Eventually, all of RLE's 570 technical reports, 7,200 reprints, and 2,000 theses will be accessible by computer. A book catalog that lists items by main entry is available in the Document Room and is also accessible electronically. For information, please contact Barbara Passero or Mary J. Ziegler in the Document Room (3-2566).

Contract Reporting. The contract reporting segment of RLE's sponsored projects database is now on-line. Beginning in 1992, RLE principal investigators will receive computer-generated

continued on pg. 2

United Way Campaign



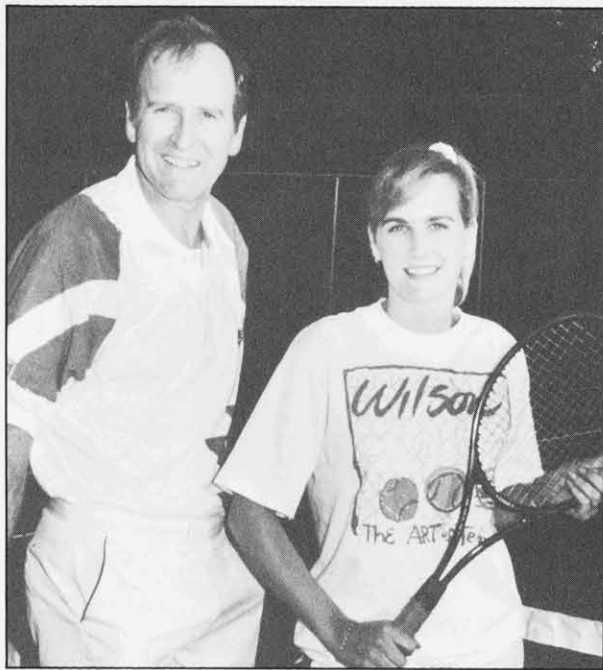
It's time once again for MIT's United Way campaign. Your generous gift will enable over 204 worthwhile agencies to reach out to nearly 1.4 million people in 81 Massachusetts communities. Donations address many critical human service needs such as affordable child care, housing, and cancer research. The United Way also supports agencies concerned with AIDS, substance abuse, the elderly, racism, youth development, literacy, and emergency services. Remember that 85 cents of every dollar you give goes to people who need it most; less than 15 cents goes to fund raising and administrative costs. This fall, RLE's solicitors are Mary J. Ziegler, Barbara Passero, and Rita C. McKinnon of the RLE Headquarters Communications Group. Please return your solicitation envelope with a generous contribution. Thanks for giving to the United Way!

No Sweat For RLE'S "Materials Man"

On May 14, 1991, U.S. Patent No. 5,014,360, "Removing Perspiration," was awarded to Eileen Smith and her father, Professor Henry I. Smith, Director of RLE's Submicron Structures Laboratory and a pioneer in submicron structures fabrication.

As a Christmas gift, Eileen had surprised her tennis-playing father by designing and "fabricating" a stylish sports jersey with terry cloth panels on the sleeves. Since many tennis players habitually wipe their brows on their sleeves, the innovative sweat-absorbing panels permitted this motion while holding a racquet in one hand and the ball in the other. When the other tennis players at Professor Smith's club admired his custom-made jersey, father and daughter decided to patent it.

Every player who has seen the practical sports jersey wants one. But, the Smith's efforts to market it with a major sporting goods manufacturer has been difficult. According to the daughter-dad duo, "The people who design tennis jerseys either don't play tennis or they don't sweat!"



Professor Henry I. Smith models the "no sweat" sports jersey designed by his daughter Eileen. (Photo by Mary Anne Smith)

Welcome to RLE



David Sunjin Lee began work as a Laboratory Assistant with Professor Leslie A. Kolodziejki on September 1, 1991 in RLE's Materials and Fabrication Group. David graduated Phi Beta Kappa from Johns Hopkins University with a BS in physics and math in 1991. While at Johns Hopkins, he tutored college freshmen in physics and helped grade school students to develop their reading and writing skills. A California native, David lives in Weston with his family and enjoys Nautilus, basketball, and reading. He plans to pursue a doctorate degree in either applied physics or electrical engineering and possibly a teaching career. (Photo by John F. Cook)

Duffy from pg. 1

became more stringent. The "golden years" of research finally ended, ushering in a new style of research and administration. "It's much busier than before," Don says, "but more interesting and diversified. It's still exciting for me."

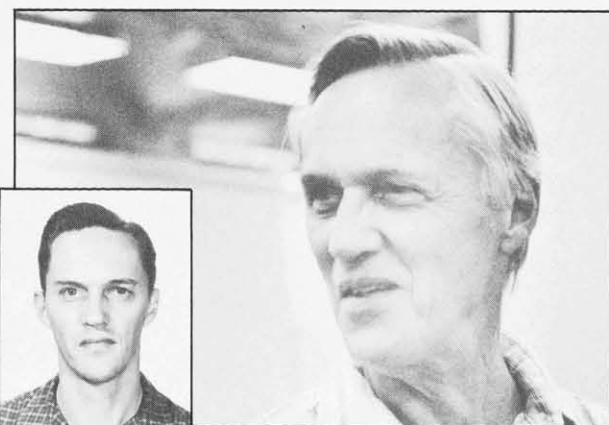
The MIT environs have been an important part of Don's world in other ways as well. He was born in Somerville and, as a young man, worked at the Brigham's in Kendall Square which stood on the current site of MIT Building E18. He met his wife of 31 years, the former Shirley Freedman of Stonington, Maine, in Central Square. Don is proud of his Irish heritage. His parents emigrated from County Clare, Ireland, in the 1920s, and he has visited family there. Don's two worlds came together for him nicely this fall when his cousin's son entered MIT as a freshman. He reminisces, "I met my cousin Lil at the boat when she came over from Ireland in 1953. She was only sixteen then."

Conscientious and hardworking, Don also makes time for a fulfilling life outside of RLE. He is an avid boater and Boston sports fan. Don and Shirley enjoy travelling, the theater, and have recently taken up ballroom dancing. They also like to spend time with their two grown children, Cheryl and Donald, and their two grandchildren, Michelle and Michael.

All in all, not bad for a temporary job . . .

- DMT

A Fond Farewell



Robert W. Aalerud, Instrument Maker in the RLE Machine Shop, retired on September 30, 1991. An Everett native, Bob attended Malden Vocational High School, trained as a machinist at the Massachusetts Trade Shop School, and served in the U.S. Coast Guard. Before joining RLE as a Machinist B in June 1963, he was a machinist and tool and dye maker at Elliott Business Machines. For most of Bob's 27 years in RLE, he enjoyed the distinction of occupying the number one spot in MIT's Faculty and Staff Directory. (Photos by Peter Aquinde and John F. Cook)

Automation from pg. 1

quarterly statements listing the deadlines for upcoming reports on sponsored research projects. These statements will include OSP number, report type and due date, reference number, and contract/grant end date. Eventually, after sufficient data has been entered, this database will provide contract reporting histories and a list of publications prepared under sponsored research projects. For information, please contact Mary S. Greene (8-5871).

Keys Database. In response to lab-wide concerns about the accessibility to RLE offices and labs, a database has been created to monitor all keys issued by Headquarters. Information can be sorted by specific key numbers, RLE room numbers, the name of a supervisor or key holder, and RLE research group. If you would like information on the RLE keys database, please contact Maureen C. Howard (3-2519).



SHORT WAVES . . .

Dorothy Gordon Adler has retired after a long association with the Institute that began in 1949 with RLE. In 1949, as Professor Jerome B. Wiesner's secretary, she met Richard B. Adler, who was an RLE doctoral candidate. They were married in 1951. Dottie remembers the toughest moment in her job when she learned of her husband's MIT faculty appointment before he did. Mrs. Adler's loyalty to her job prevailed, and Professor Adler was informed through official channels. Richard Adler went on to become Distinguished Professor of Electrical Engineering and Computer Science as well as Associate Head of the department before his death in 1990. Although she left RLE in 1954 to raise three sons, Dottie returned in 1978 to work in the MIT Alumni Office until her retirement this year.

RLE's Personnel Officer has a new name. Congratulations to **Mrs. Ramona (Alston) Allen!**

Secretary **Felicia G. Brady** of the Plasma Physics Group performed a piano recital as part of MIT's Musicians Behind-the-Desk Series on November 13, 1991, which included selections from composers Scarlatti, Beethoven, and Chopin. Felicia is currently Associate Organist and Choirmaster at Boston University's Marsh Chapel.

Research Assistant **Katherine L. Hall** of the Optics and Devices Group and husband David Harrison are the proud parents of Thomas Mulcahy Harrison (22.5 inches/9 pounds, 3.5 ounces) who was born August 7, 1991 in Natick. Someday, Thomas may follow in dad's footsteps as the proprietor of Harry's Homemade Salad Sauce.

Research Assistant **Andrew Lumsdaine** of the Circuits and Systems Group and wife Wendy had some fireworks of their own on July 5, 1991 with the arrival of Benjamin Edward (7 pounds, 12 ounces) at Emerson Hospital in Concord.

Senior Stock Clerk **Brian E. Ray** and his wife Robin celebrated Father's Day 1991 in style with the arrival of Lauren Ashley (19 inches/7 pounds, 14 ounces) at Melrose Wakefield Hospital.



RLE celebrated its 45th anniversary at the MIT Museum on October 28, 1991. Revelers from the Advanced Television and Signal Processing Group join in the gala (from left): Research Assistant Lon E. Sunshine, graduate student Aradhana Narula, Senior Staff Assistant Debra L. Haring, Teaching Assistant Andrew C. Singer, and Administrative Assistant Cynthia LeBlanc. (Photo by John F. Cook)

RLE undercurrents

undercurrents is a publication of the Research Laboratory of Electronics for the RLE community at MIT. The following individuals contributed their time and energy to this issue: John F. Cook, Dorothy A. Fleischer, David W. Foss, Virginia R. Lauricella, Gina L.B. Milton, Robert H. Priest, Barbara Passero, William H. Smith, and Donna Maria Ticchi.

Inquiries may be addressed to:

RLE **undercurrents**
Research Laboratory of Electronics (36-412)
Massachusetts Institute of Technology
77 Massachusetts Avenue
Cambridge, MA 02139-4307

undercurrents is printed on recycled paper.