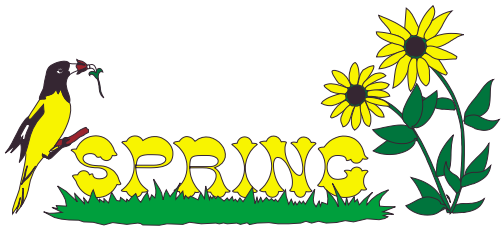


APRIL 2003 NEWSLETTER

FROM THE DESK OF GEORGE ABRAHAMSON

Happy Spring greetings to all! Over the past few months we have moved our quarters from our basement location next to the Credit Union to great new space on the third floor (AC-327 and adjacent offices--Pat Henry's old office area). Don Nielson was the prime mover in getting the new space; the old space leaked badly during heavy rains and seriously affected the work of the Archives Committee.

In his All Hands talk on January 28, President Curt Carlson reported that 2002 was one of SRI's best years ever. The Make-a-Buck campaign succeeded and SRI retained its credit rating, thereby avoiding increased interest charges of $1 million per year. Keeping his promise of playing the violin for the staff if the Make-a-Buck campaign succeeded, Curt and Mark Chung, a software engineer in the Policy division. played a duet in which the two played the same tune, but the second part was one measure behind. It was well done and they received a standing ovation.

Since moving to our new location, the main activity of the Steering Committee over the past several weeks has been to kickoff the Kil-a-Watt • Save-a-Buck campaign. The purpose of the campaign is to reduce the cost of electricity to SRI by $250,000 per year or more by getting the staff to turn off lights, computers, office equipment, and lab equipment when not in use, particularly on nights and weekends. The Alumni Association has taken the leadership role in the campaign and will receive a small fraction of the savings to support Association activities. Hopefully, this will enable us to keep reunion fees low and undertake some new initiatives.

This will be my last note to you as Chair of the SRI Alumni Association. My health has recently deteriorated and I am no longer have sufficient time or energy to devote to the job. Boyd Fair has agreed to serve as Chair for the immediate future.

I have had the great pleasure of working with our talented and dedicated Steering Committee. They have undertaken and completed tasks willingly, cheerfully, and professionally. I thank the Committee members and know they will give Boyd the same support I have enjoyed.

I wish you each a pleasant Spring and Summer and hope you will plan to attend the Spring Picnic and/or the Fall Reunion.

A Special Thank You:

As George Abrahamson steps down as the head of the Alumni Association and Chair of the Steering Committee, we want to express our gratitude for all that George has done in founding and shaping the Association during these last 7+ years. Among his many good ideas, the Kil-a-Watt campaign is only the latest. He always chaired lively and productive meetings (often bringing treats), and he knew how to gather management support for our programs and events. We will surely miss him.

---The Steering Committtee

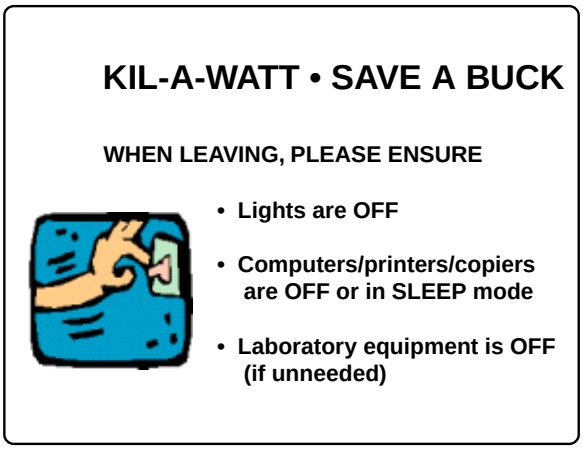
"KIL-A-WATT • SAVE A BUCK" PROGRAM TO CONSERVE ENERGY AT SRI

In March, President Curt Carlson announced a site-wide campaign to help reduce the $3.7 million that SRI spends on electricity each year. The targeted saving is $242,000, or 6.5%. The staff is being asked to turn off lights, computers, office equipment, and lab equipment when not in use, particularly on nights and weekends. The Alumni Association has been spearheading this drive by distributing posters as reminders, along with stickers to place by each light switch and on each computer.

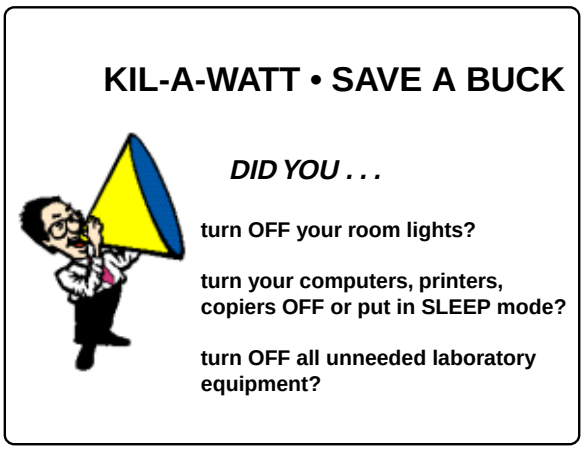
Building on an idea initially conceived by George Abrahamson, the Alumni Association has planned a campaign that it estimates will potentially save $133,000 by turning off more lights in labs and offices at night and on weekends. There is a further saving by turning off computers and monitors computer power of about $55,000. Removing lamps in areas where we have identified excess illumination has a $53,000 potential saving. If lowered electrical usage reduces heat buildup, additional savings may be realized from reduced air conditioning demand.

The Alumni Association will receive a small fraction of the savings to support Association activities.

Serving on the Energy Committee, chaired by George Abrahamson, are Joyce Berry, Pete Valenti, Fred Weil, and Donn Parker with contributions from Earle Jones, John Herndon, and Bob Schwaar. The logo was prepared by alumni member Phil Monti of MontiGraphics. Distribution of the posters and stickers was made by alumni members Murray Baron, Joyce Berry, Kelly Connolly, Boyd Fair, Jim Peterson, Bob Schwaar, Lucy Steelman, and Pete Valenti.



Posted on bulletin boards and office walls.



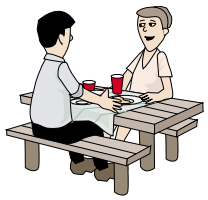
Posted on exit doors.

ANNUAL SPRING PICNIC

The Annual Spring Picnic will be held on May 8 at noon in the patio area between Buildings 100 and 108. Bring your own lunch or BBQs and cooks will be provided for those who want to bring hamburgers or hot dogs.

Everything else will be provided so come and enjoy yourself and visit with friends.

See the last page of this newsletter for more details. Please **RSVP** to the e-mail address shown or cut and return the coupon by **May 1**.



PRESIDENTIAL ACHIEVEMENT AWARD TO GEORGE ABRAHAMSON

At a ceremony in January, George Abrahamson was honored as the first recipient of the SRI Presidential Achievement Award. The presentation was made by Curt Carlson.

The Presidential Achievement Award was established in 2003 to honor SRI staff members whose extraordinary contributions have made a positive and lasting impact on the world, SRI's clients, and SRI. Recipients of the award are role models – SRI Champions – who exemplify SRI's values: client focus, vision, perseverance, integrity, excellence, passion, and teamwork.

George Abrahamson (left) receives the first Presidential Achievement Award from SRI President and CEO Curt Carlson (right).

George Abrahamson began his SRI career in 1953. He joined what was then known as the Extreme Pressures and Explosives Laboratory, later named the Poulter Laboratory in honor of Thomas Poulter, one of Dr. Abrahamson's mentors.

While working at SRI, George Abrahamson earned a Ph.D. in engineering mechanics from Stanford University, conferred in 1958. He was named Director of the Poulter Laboratory in 1969 and Vice President of the Physical Sciences Division in 1980. He then assumed the vice presidency of the Life Sciences Division in 1988, with the new title of Vice President of Sciences.

At SRI, George developed a program for the Air Force to simulate the effects of nuclear weapons on reentry vehicles. He led a team that made SRI a key developer and tester of vulnerability and lethality criteria for missile and anti-ballistic-missile systems exposed to nuclear attack. He also led development of innovative uses of high explosives and propellants. Many of his ideas in scale modeling of dynamic phenomena are in use today throughout the world.

In 1991, George left SRI to become the Chief Scientist for the U.S. Air Force. He held that position until 1994 when he returned to SRI as Acting Vice President of the Physical Sciences Division.

George has remained very active at SRI; in 1996 he co-founded the SRI Alumni Association, which he continues to lead, and he also heads the Gibson Achievement Award committee.

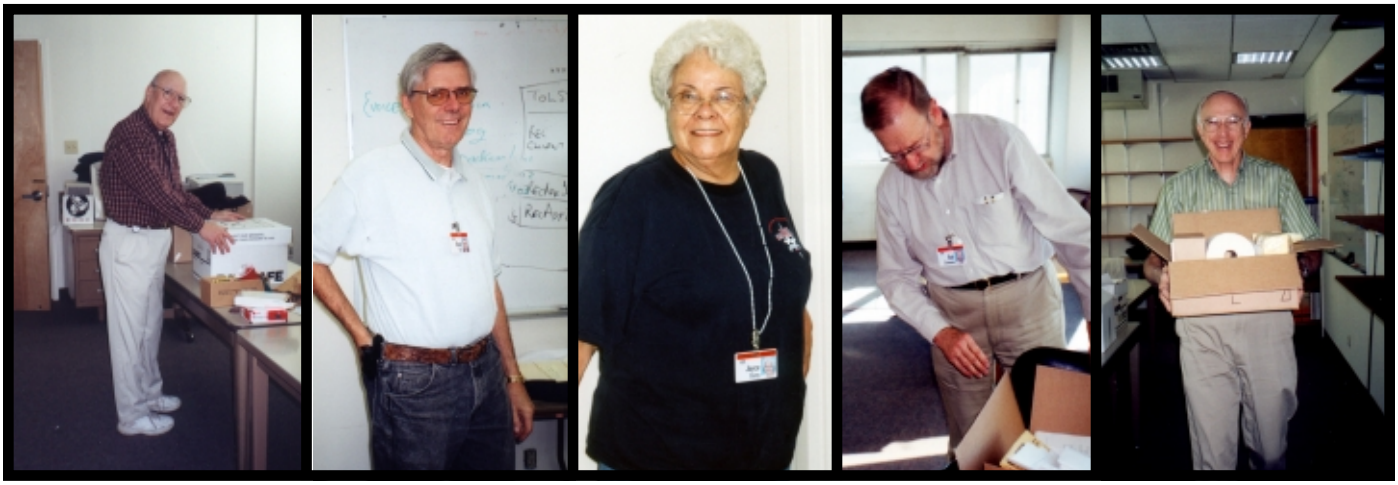
GIBSON AWARD CEREMONY SCHEDULED

The Weldon B. Gibson Achievement Award recognizes SRI employees whose work has improved the peace and prosperity of society and has brought special luster to SRI's reputation. The recipient will be announced and the Award will be presented at a ceremony in the I-Building on Wednesday, June 11 at 4:00 pm, followed by a reception. All SRI Alumni are invited to attend.

ALUMNI'S NEW HOME

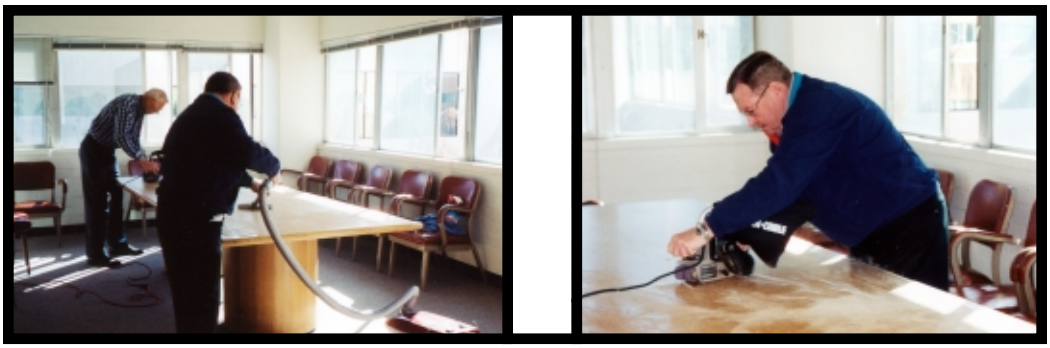
The SRI Alumni Association has moved its offices from the basement in AA-018 to a group of light and airy offices on the third floor of A building. The files, archives, and computers are now located in AC-327. Committee meetings are now held around a conference table in a sunny corner office. Thanks to SRI management for making this space available.

Moving Day

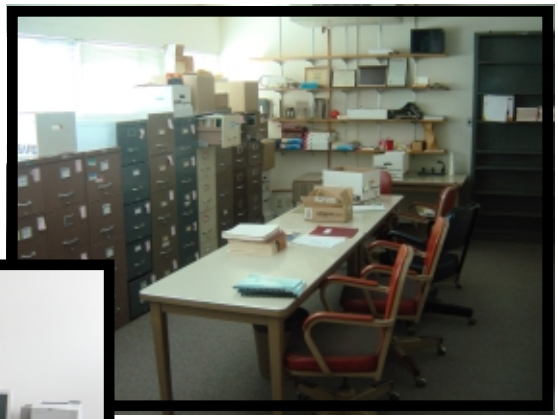


George Carpenter | Boyd Fair | Joyce Berry | Bob Schwaar | Don Nielson

Don Cone hooking up the computers in the computer room.

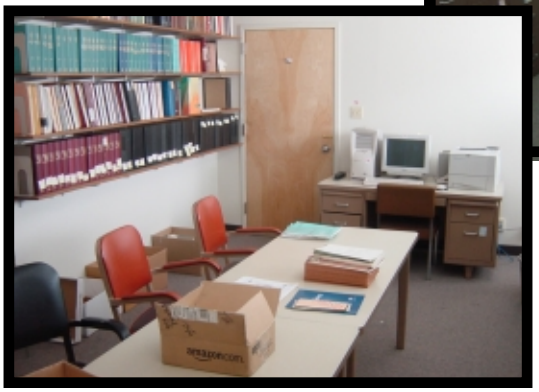


George Abrahamson and Pete Valenti sanding the conference room table.



Bright new conference room.

Not Pictured: Millie Abrahamson, Don Berry, and Bob Dawson.



The Archive's Committee finally has room to work and enough storage space for their files and data.

LUNCHTIME VIDEO EVENTS

A new series of monthly events at SRI is the Lunchtime Video Event. There will be a different theme each month:

April 24:	Multicultural Communication Month
May 22:	Asian/Pacific American Heritage Month
June 5:	Gay & Lesbian Pride Month
JULY 1:	**All American Celebration**, featuring the Barbecue Rock Band, live.

This is a good opportunity for casual contact with old friends among the SRI staff. The events are held from noon-1:30 pm in the SRI Cafeteria

SRI TODAY

Current projects at SRI are summarized on The SRI Digest, an e-zine, at http://www.sri.com/news/digest/ Each short article contains references to more complete information. Headlines from the current issue include:

INFORMATION TECHNOLOGY NEWS:
* SRI and Consortium Promote Cybersecurity R&D
* Network Security Monitoring Patent Issued
* New Speech Recognition Software Available
* SRI Performs Combat Training System Integration for National Guard and Delivers "DFIRST"

BIOSCIENCES AND BIOINFORMATICS NEWS:
* SRI Announces HumanCyc, a new database
* Major New NIMH Contract
* Oncology Drug called PDX Licensed to Allos Therapeutics
* NCI Selects SRI Breast Cancer Therapeutic

AUTOMATION NEWS:
* New Patent for "Frictionless Transport" Technology

EDUCATION NEWS:
* SRI Evaluates Impact of Ubiquitous Computing in Classrooms
* New Book Examines the "Virtual High School"
* Charter Schools Evaluated

also: STAFF NEWS, EVENTS, and SRI IN THE NEWS

Here are some other projects, with descriptions excerpted from online press releases on the SRI Webpage:

NATIONAL CANCER INSTITUTE SELECTS SRI'S NOVEL AKT INHIBITOR DRUG FOR FURTHER DEVELOPMENT AS A CANCER CHEMOPREVENTATIVE

Novel Drug Shows Potent Oral Anti-Tumor Activity against Preclinical Tumor Models

The National Cancer Institute (NCI) has approved a cancer prevention drug developed by SRI International, for inclusion in the NCI's "Rapid Access to Preventive Intervention Development" (RAPID) program. This is the first SRI drug candidate to be developed in the RAPID program, which is designed for the expeditious movement of novel drugs from the lab to the clinic.

"SRI expects that the drug, SR13668, will have three potential clinical applications: primary prevention for healthy, high-risk individuals to reduce the risk of developing cancer; adjuvant prevention for cancer survivors to suppress cancer indefinitely and thus prevent cancer recurrence; and single and combination agent therapy," said Glenn Rice, Ph.D., vice president of SRI's Biosciences Division.

The development of this drug candidate in the RAPID program will provide necessary data for its filing as an Investigational New Drug (IND) with the FDA..

SRI TODAY (Concluded)

The RAPID program will assist SRI's development of the drug by providing preclinical and Phase I clinical development support with a goal of reaching Phase II clinical efficacy trials.

About SR13668

Cancer prevention drugs involve the use of natural or synthetic substances on a long-term basis to reduce the risk of developing cancer in apparently healthy individuals, or the chance of cancer recurrence. SRI has discovered and optimized through computer-aided structural analysis and rational design, a novel class of orally active analogues of dietary components whose effects include anti-proliferation, apoptosis and anti-angiogenesis. SR13668 exhibits potent tumor growth inhibitory activity and potently inhibits invasion. It is also active against tamoxifen-resistant cells and inhibits drug resistant tumors in vivo. Moreover, preliminary safety studies show that SR13668 is non-toxic and nonmutagenic at doses vastly exceeding required therapeutic levels.

SR13668 works through inhibition of the cell survival-promoting oncoprotein AKT. This oncogene has attracted much attention from researchers because of its central role in regulating cell proliferation and survival. It is abnormally activated in many human malignancies such as breast, prostate, lung, pancreatic, liver, ovarian and colorectal cancers. Increased activation is linked with tamoxifen resistance, drug and radiation resistance, and apoptosis resistance. AKT activation and overexpression has been shown to be tightly linked with increased invasion and angiogenesis signaling, and is correlated with poorer outcomes in human prostate and breast cancers.

"This oncogene appears to be an extremely important clinical target for inhibiting tumor drug resistance and invasion, either in the context of use as either an adjunctive chemopreventative or as a therapeutic drug," said Dr. Rice.

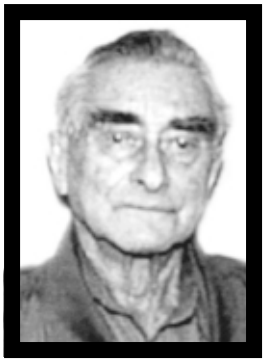
SRI senior organic chemist Ling Jong, Ph.D. and senior biochemist Wan-Ru Chao discovered the drug candidate. For her work in this drug class, Dr. Jong was awarded first place in the California Breast Cancer Research Program's Cornelius L. Hooper Award for Innovation of Research in Fall 2002.

SRI announced in December 2002 that the NCI's Developmental Therapeutics Program selected SR16158, a novel breast cancer treatment agent discovered by SRI, for its competitive RAID (Rapid Access to Intervention Development) program. RAID is accelerating further preclinical development of this drug candidate to determine its efficacy against hormone-dependent breast cancer.

More information about the RAPID and RAID programs can be found at http://www.cancer.gov. (March 17, 2003)

The SRI Alumni Newsletter is published three times a year (in April, August, and December) by the SRI Alumni Association, 333 Ravenswood Avenue, Room AC-327, Menlo Park, CA 94025.
Editor: Robert Schwaar Layout: Joyce Berry

IN MEMORIAM



Charles Abraham Rosen, who pioneered artificial intelligence in the 1960s and 1970s and helped found one of California's best-known premium wineries, died in Atherton on Dec. 8, one day after his 85th birthday.

The cause was pneumonia, said his son, Hal Rosen.

Charlie joined SRI in August 1957 as a Senior Research Engineer in the Control Systems Laboratory. He later transferred to the Applied Physics Laboratory, where Charlie developed the ability of machines to recognize hand-printed characters, a first for the time. That work led directly to a focus on artificial intelligence. In 1966, when SRI created the Artificial Intelligence Center, Charlie directed it. The most famous success of the Center was Shakey, the first robot to see and learn on its own.

His success came from his ability to find the edge of creative thought and innovation in his discipline and to push past the known limits, developing things like neural networks in machines, and robots like Shakey, which combined all existing machine intelligence advances into a single unit.

The robot could see and feel objects in its path and navigate around them on its own. Algorithms created to run the robot are still used for Internet mapping services such as MapQuest.

He also blasted doomsday predictions about the evils of artificial intelligence, instead seeing it as an improvement to workers' lives and an aid to human creativity. Artificial intelligence "would make a much more livable world by doing mundane tasks with a robot rather than bore an intelligent human being," Hal Rosen said.

"If it looked new and exciting and untried, that was Charlie's meat," said Nils Nilsson, who was hired by Charlie at SRI, and who later chaired the computer science department at Stanford University from 1985 to 1990. "He loved that sort of thing, especially if people cautioned him against it."

Charlie received those same cautions in 1959, when he and some friends from SRI bought an old winery in the Santa Cruz Mountains, which they named Ridge Vineyards. The families labored on the weekends and used their scientific prowess to turn the grapes into one of the premier wines in the United States. For 27 years the three founders and their families shoveled, planted, and pruned, producing prize-winning cabernets and zinfandels. Their picking/ crushing/bottling parties became legend, according to Hew Crane, the last surviving founder. "Charlie was very technically minded but was guided by his tongue with tastes," Hew added.

Charlie grew up in poverty in the red light district of Montreal. His mother, who raised him alone, ran a candy shop, above which Charlie started his first electronics laboratory. He and a friend built crystal radios from pencil lead and tin foil, his son Hal said. After high school, he moved to New York to wait on tables at a resort in the Catskills to support his mother. There, he met his future wife, Blanche.

Charlie scored high enough on his high school exit exam to be able to attend Cooper Union in New York City on a scholarship; he graduated with a B.S. in electrical engineering in 1940. He worked with the Royal Canadian Air Force during World War II and later for General Electric while co-authoring the first textbook on transistor devices and earning a doctorate from Syracuse.

After a vacation in the Bay Area, Charlie and Blanche decided to move to California; Charlie joined SRI in August 1957.

Charlie was a fierce defender of the engineers in his lab; he was a member of the Institute Staff Advisory Group (ISAG), formed by President Charlie Anderson in the late 60s to provide a channel of direct communication between the president and the staff. As an early ISAG president, Charlie was instrumental in shaping the group and its procedures. (ISAG continued when Bill Miller became President, but was disbanded before the end of Miller's term.)

Charlie retired at the end of 1978 as Senior Scientific Advisor for the Artificial Intelligence Center. His passion for creativity and invention continued after his retirement, as he sat on the boards of directors of ten companies and started a company to deliver pharmaceutical drugs.

Charlie was a charter member of the Alumni Association Hall of Fame, inducted in 1998.

He found time in retirement to put an old family recipe to good use, developing a pickle recipe for home use and distributing kits of directions with a packet of alum and spices.

The day before his death, Charlie made a tape recording describing new frontiers in artificial intelligence. He wanted to work with a writer to turn his ideas into a book.

Charlie is survived by sons Hal and Steve, daughters Naomi and Sema, and five grandchildren. Blanche Rosen, his wife of 60 years, died in June 2002. (See August 2002 Newsletter, p. 9.)

A memorial service was held in January 2003.

IN MEMORIAM (Continued)

Karen Ruth Allen

Karen Ruth Gustafson Allen died on October 27 at her Los Altos home. Born in 1942 in Deadwood, SD, Karen was a 1964 Stanford graduate, majoring in Mathematics. She worked at SRI as a Systems Analyst for several years in the mid-1960s. She went on to do similar software development work at GE, Control Data, Sylvania, and Cray Research, all in the Bay Area.

Karen was a strong supporter of environmental stewardship and enjoyed the outdoors, gardening, writing, and traveling with her husband.

Her survivors include her husband, Michael, her mother and mother-in-law, and her sister and sister-in-law.

Cecil Barnes III

Cecil Barnes III died December 26, 2002 at the age of 90.

Born in Winnetka, Ill., Barnes attended Harvard, graduating in 1936. He then joined the merchant marine, serving mostly in the engine room, before he enlisted in the Navy. During WW II, Lieutenant Barnes discovered San Francisco. He and his wife moved to Palo Alto in 1950.

He joined SRI in September 1950 in the Electrical Engineering Dept. as a Junior Research Engineer. He later transferred to Publications Services, where he rose to become a Senior Technical Writer/Editor in Org 191 before he retired in August 1977.

Cecil was an avid sailor and a member of the Palo Alto Yacht Club. He also enjoyed exploring, horseback riding, and camping.

Cecil was the older brother of noted architect Edward Larrabee Barnes, whose works include the 59-story Citigroup skyscraper in midtown Manhattan.

Other survivors include Cecil's son Chip, his daughter Marni, and a grandson.

Robert Crews

Robert Crews, 83, died on January 2. He had worked in the Physical Electronics Lab, beginning as a Research Physicist in October '52 and leaving as a project leader and Senior Research Physicist in November 1964.

Crews was born in Pendelton, Oregon, and attended high school in Santa Rosa, where he was class valedictorian in 1937. He interrupted his education at UC Berkeley after his junior year to join the Army Air Force. After combat missions over northern Germany and service during the occupation, Captain Crews earned a B.S. in Physics from Oregon State in 1947, an M.S. in 1948, and a Ph.D. in 1952.

After he left SRI, Crews taught math and physics at Chabot College in Hayward. He retired in 1984.

Survivors include his second wife, Alpha, sons Joel, Robin, and Alden, daughters Christy and Nancy, and six grandchildren.

George Duvall

George Duvall died on January 3 in Vancouver, Wash., after a long illness.

George joined the Poulter Laboratories as a Senior Physicist in November 1953.

He built and led the Shock Physics Group, then became Director of the Poulter Labs. He left SRI in March 1965 to become Professor of Physics at Washington State University, where he established a Shock Dynamics Lab. As a leader in research on shock propagation in solids and liquids, he was in 1983 appointed Chair of the National Academy of Sciences' Committee on Shock Compression Chemistry in Materials Synthesis and Processing. He received the Shock Compression Science Award from the American Physical Society. He retired from WSU in 1988.

While he was at SRI, George contributed to the earliest understanding of shock wave propagation. The list of his advances includes hydrodynamic attenuation, material strength effects, optical techniques for free surface measurements, instabilities and multiple wave interactions, and studies of detonation in porous materials. He laid the groundwork for this important field of research, and was a mentor to a generation of scientists at SRI and WSU.

Fred Kampfhoefner

Fred Kampfhoefner died on March 29 . A memorial for Fred is being planned for Saturday, 26 April at 1:30 PM. It will be held at his house at 175 Ravenswood Ave., Atherton. We hope to have more information on Fred's life in our next issue.

During WW II, Fred joined Fred Terman's Radio Research Lab at Harvard, then followed Terman to Stanford after the war. He came to SRI in July of 1949, and became Manager of the Industrial Electronics Lab in 1953. His group developed the high-speed check-handling systems, including Magnetic Ink Character Recognition, for the famed ERMA project.

His labs of some 50 professionals later became active in optical character recognition (OCR) for numerous industrial clients. Several of the professionals he trained later spun off to form the successful Systems Control, Inc

He retired in December 1991.

Fred was a charter member of the Alumni Association Hall of Fame, inducted in 1998.

IN MEMORIAM (Concluded)

Norman R. Nielsen

Norman R. Nielsen, 61, former employee of SRI's Engineering and Business Consulting Groups, SRI Consulting, and Atomic Tangerine, died at his home on December 25, 2002.

Norm was born in Pittsburgh in 1941. He was valedictorian of the 1963 graduating class at Pomona College, where he met Jeanette Elsener and married her two days after graduation. Moving to Stanford, he earned an MBA in 1965 and a Ph.D in Operations and Systems Analysis in 1967.

After serving on the Stanford faculty, Norm joined SRI in June 1973 as a Senior Research Engineer in the Control Systems Laboratory. In his 28 years at SRI and its spinoffs, Norm worked in various fields related to information technology, including artificial intelligence, speech recognition, network architecture, and information security. Norm was instrumental in gathering the initial client base for Nuance, the SRI spinoff specializing in speech recognition systems.

He is listed in Who's Who in America, and Who's Who in Science and Engineering. He wrote more than 75 articles and papers on information technology topics and was the author of two books on the practical application of artificial intelligence technology.

Norm's colleagues remember him as possibly "the best consultant ever." His project management skills were complemented by an outstanding ability to teach and mentor young staff members.

Norm was the Associate Practice Director of Information Technology when he officially left SRI International at the end of 1995 to join the newly formed SRI Consulting as Director of Emerging Technologies. He moved to Atomic Tangerine when it was formed several years later.

Survivors include his wife, Jeanette, daughter Joanne, and son Christopher.

Robert Wing

Robert Wing died at his Inverness home on March 17, 2002.

He came to SRI's Engineering Division in November 1955 as an Administrative Assistant. Bob was a Senior Administrative Engineer in the Artificial Intelligence Center when he resigned in September 1978.

He later spent three years with a startup company in Salem, Oregon.

Bob liked to hike, sail, ski, and kayak. He was also enthusiastic about electric cars—in 1974 he converted a 1959 MGA to electric drive. He was a founder of the North Bay Chapter of the Electric Automobile Assn. He donated his extensive collection of articles, newsletters, and conference proceedings on electric cars to the Green Library at Stanford.

Philip O'Donnell

Philip O'Donnell died on November at age 80. He came to SRI from Lockheed Martin in April 1965 as Contract Administrator in Central Services. When he eft in June 1979, he was the Manager of Proposal Administration and Special Projects in the Contracts and Material Services Division.

Born in 1922 in Butte, Montana, Phil earned a scholarship to Stanford in 1940, and graduated from Stanford Law School in 1948, after wartime service in the Army Air Corps, during which he earned 5 medals flying 35 missions.

Survivors include his wife of 55 years, Beatrice Brown O'Donnell, sons James, Scott, and William, and a grandson.

Mary Catherine O'Herron Oeser

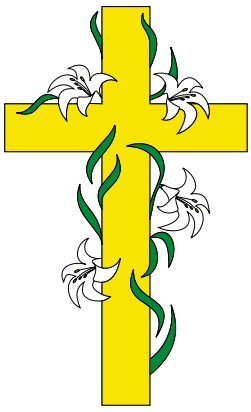
Mary Oeser died on Feb. 7 after a long illness. She was 87. Mary began at SRI as a stenographer in September 1950. She spent the first 17 years of her 31 years at SRI as assistant to Karl Folkers, president, then as executive secretary to Charles Cook, the senior vice president of Central Staff. Mary retired in 1981.

Born in Carroll, Iowa, she moved to California in 1950 with her husband, Harold. They lived in Los Altos since 1963.

Virginia Weber

Virginia Weber died unexpectedly on January 1. She had worked at SRI from October 1947 (she had ID #49) as an Administrative Assistant, until August 1949, at which time she left to raise her two children. Shereturned in March 1978, working as an HR Representative in the Engineering Research Group's Human Resources until late 1991.

She is remembered for her hard work, sense of humor and kindness to all. In her spare time and after her retirement, Virginia was active in her church, played the piano for the local schools, and enjoyed time with her grandchildren.



SRI ALUMNI ASSOCIATION'S
ANNUAL SPRING PICNIC

MAY 8, 2003

NOON

IN THE PATIO AREA BETWEEN BUILDINGS 100 AND 108

(same as last year)

Bring your own bag lunch **OR** BBQs and cooks will be provided
for those who want hamburgers or hot dogs. The cafeteria is available
if you would like to simply purchase your lunch.

We will provide plates, forks, knives, napkins, cups, ice, water, and chips/dips.
Condiments for hamburgers and/or hot dogs will also be provided.
(mustard, catsup, mayo, lettuce, and tomatoes)

There will be plenty of seating so come and enjoy yourself
and visit with friends.

RSVP by May 1, 2003

If you have access to e-mail, please RSVP to:

Boyd Fair - bfair@direcpc.com
or
Pete Valenti - pvmenlo@earthlink.net
or
cut and return the coupon to the address shown.

Please Cut Off and Return To:

SRI ALUMNI ASSOCIATION AC117
SRI International
333 Ravenswood Avenue
Menlo Park, CA 94025

Yes, (I, We) will attend the Annual Spring Picnic on May 8 at Noon.

Name(s): _____
Address: _____
Phone Number: _____