SRI International

alumni
association

APRIL 2009 NEWSLETTER

MESSAGE FROM PRESIDENT BOYD FAIR

Boyd Fair

As I was preparing to write this introduction, I was thinking back over the interesting and happy times I had during my 40 years at SRI. Then I recalled seeing a recent Sony video on YouTube that pointed out how our world is changing and how it is affecting SRI and its "family." For example, did you know that the top 10 in-demand jobs in the United States in 2010 will not even have existed in 2004? The students we know today are preparing for jobs that don't yet exist and that will use technologies that haven't been invented yet! Furthermore, according to the U.S. Department of Labor, today's students will have between 10 and 14 jobs by the time they turn 38 years of age. Gone are the days of the 25-year award pins and gold watches at retirement. The job world (and alumni associations) are changing in interesting ways.

Last year marked the 40th anniversary of SRI's invention of the computer mouse. SRI and several other organizations organized and hosted a celebration of the event at Stanford University, and SRI's Doug Engelbart was the honored guest. For those of you who missed it, it is described within by Don Nielson, along with some pictures taken during the presentations. Richard Knock has contributed an interesting history of the mouse.

We recently came across an old picture of some SRI staff who were involved in the very early days of The Dish in the Stanford foothills. Many people ask me what The Dish is used for, so we put together a brief article summarizing its history and use and included it with the picture for your reading and viewing pleasure.

Looking at current times, we have summarized Curt's most recent All-Hands Meeting, in which he discussed the current state of the institute. There is also an annual statement of the SRI Alumni Association's financial health that Pete Valenti has provided. It shows that the organization remains financially healthy with approximately 460 active memberships. And don't miss the short article on the status of the new Hall of Fame plaque unveiled at the last Alumni Reunion.

Looking to the future, there are several abstracts of current research activities at SRI. I think you will find the information about new power generation techniques and drug development very timely. For the golfers in the group, don't miss the article about the new handheld golf ball finder! (Personally, I don't need this technology—not because I am such a great golfer, but because I have a dog with a very good nose for golf balls!)

I hope you enjoy reading this issue. If you have any suggestions or contributions for future issues, please contact Mimi or Klaus. And don't forget to sign up for the Spring Fling* at the Computer History Museum. I hope to see many of you there. — Boyd

A 40TH ANNIVERSARY CELEBRATION
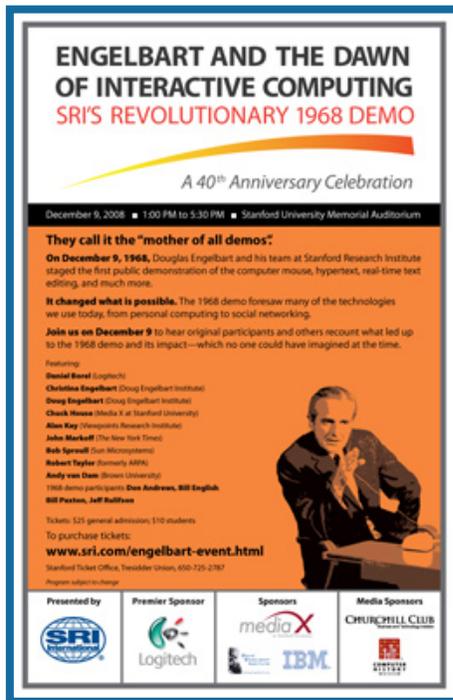
Celebrating 40 Years of Interactive Computing

By Don Nielson

A Watershed 90 Minutes

On December 9, 1968, the largest hall in the San Francisco Civic Center held a standing-room-only audience of more than 2,000. It was the Fall Joint Computer Conference, one of only two computer conferences a year, and the attendees had crowded into the hall to see an unusual event. In lieu of a technical paper, there was to be a live demonstration of a new approach to how computers were used.

Doug Engelbart, the founder and leader of SRI's Augmentation Research Center, had arranged with the conference leaders to put on a 90-minute demonstration. Needless to say, that was not only an unusual request but also one that involved some risk. Granting the request required no small amount of faith on the part of the conference organizers and the government sponsors of the SRI work, as well as SRI and the technical team that would make it happen. What attendees saw was the first public demonstration of interactive computing, an approach in which the user would be able to control what the computer was doing at any instant. Until then, virtually all computing had been done via a batch mode whereby programs were submitted to intermediaries for compilation and execution and the results picked up afterwards.

Engelbart and the Dawn of Interactive Computing
A 40th Anniversary Celebration

The computer community met at Stanford on December 9, 2008, to recall and acknowledge the remarkable demonstration Doug Engelbart had given 40 years earlier introducing interactive computing.

Don Nielson helped organize the celebration and put in many hours to make it the success that it was. In appreciation of his efforts, the sponsors gave him an event poster, signed by many of those who had attended the original demonstration.
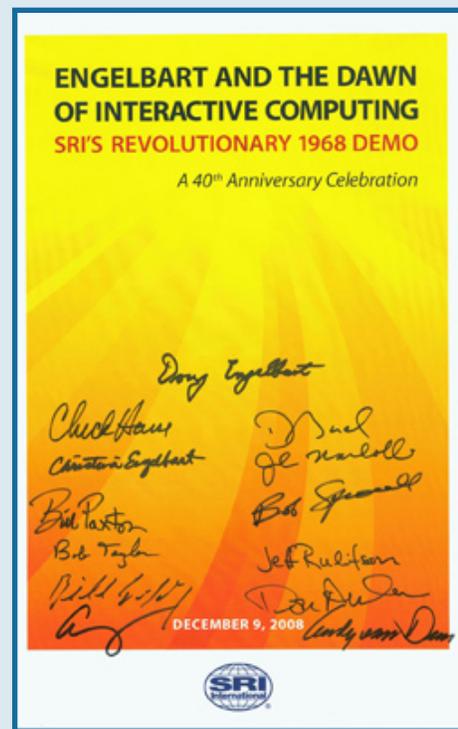
Signed, framed poster that sponsors gave to Don Nielson in recognition and appreciation of his efforts in planning the celebration

For the first time, at least in an integrated and cohesive sense, the public saw the ingredients of what essentially all of computing is today: real-time interaction, logical hypertext linkages to related information, the mouse, video and audio collaboration between Doug in San Francisco and a colleague in Menlo Park, joint editing of the same document, and a host of other capabilities, some of which are only beginning to be widely available now. The computer running all this was at SRI and was connected to the Civic Center by means of a specially constructed microwave link relayed along Skyline Drive.

A 40TH ANNIVERSARY CELEBRATION (Concluded)

The demonstration was a resounding success and was so impressive that 40 years later it is accepted as a watershed moment in the history of computing.

Another SRO Audience 40 Years Later

On December 9, 2008, exactly 40 years after what has come to be called the Mother of All Demos, SRI and several other sponsors hosted a celebration at Stanford Memorial Auditorium.

The anniversary celebration began with a 30-minute video of excerpts of the film taken that day 40 years ago. When the video ended, the full-house audience at Memorial Auditorium gave a spontaneous standing ovation for what they had seen—just as the Civic Center audience had at the original event. Full of emotion, Doug gratefully acknowledged their recognition.
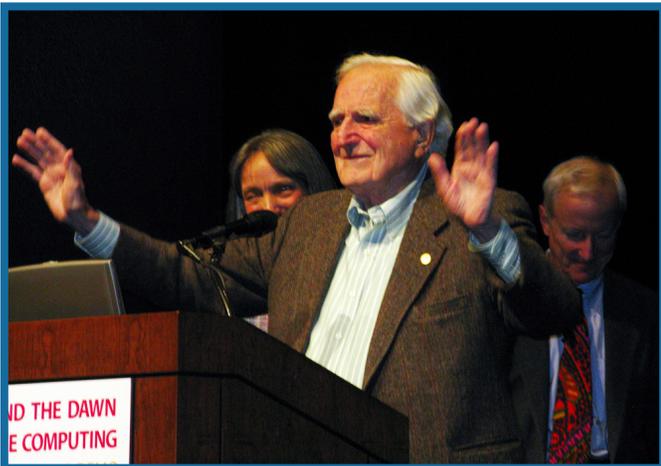
Doug Engelbart acknowledging the audience's standing ovation

As many of the original attendees as could be found were reunited at the celebration, participating in a program that both recapped the event and heralded its significance. Some of them sat on a panel to recall aspects of that day (see photo)—Bob Sproull, moderator, from Sun Microsystems; Don Andrews, Bill English, Bill Paxton, and Jeff Rulifson representing SRI; and Andy van Dam from Brown University.

Daniel Borel, a cofounder of Logitech, discussed the significance and impact of the mouse and announced that Logitech had shipped its billionth mouse in December! The timing could not have been better.

Other notable participants lauded Doug for his vision and its profound impact on society. In particular, that impact

Panel recalling the events of 40 years earlier: from left to right, Bob Sproull, Don Andrews, Bill English, Bill Paxton, Jeff Rulifson, and Andy van Dam

centered not just on the technical innovations introduced 40 years earlier but on making the computer an instrument for fostering group collaboration, dealing successfully with the increasing complexity of important problems, and effectively raising our collective intelligence.

The next day, SRI hosted a reunion lunch for former members of the Augmentation Research Center and their guests. The accompanying photo shows the two responsible for building the first computer mouse, Bill English and Doug Engelbart, cutting a ceremonial mouse cake.
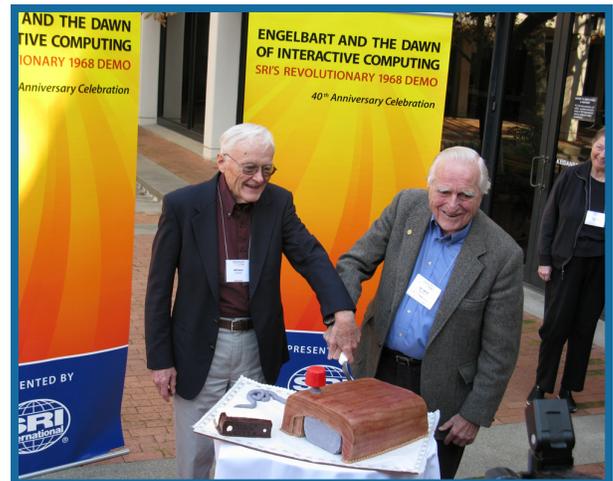
Bill English (left) and Doug cutting a cake in the shape of the original mouse

The celebration served well to raise awareness of Doug's contributions and the reputation of SRI.

Don Nielson leads a group of SRI alumni who are sifting through SRI historical files, separating the wheat from the chaff to preserve pictures, files, and research of note for posterity and historical interest.

SRI's COMPUTER MOUSE

The History of SRI's Computer Mouse

By Richard Knock

For those who saw Doug Engelbart demonstrate the computer mouse on the computer screen in 1968, the experience was exciting and earth shattering. Yet it took a number of years before the new concepts and the mouse gained wide acceptance.

The now famous mouse patent, US 3,541,541, was issued in November 1970. In 1981, Xerox's Palo Alto Research Center (PARC) was working on advanced user interfaces and licensed the mouse because it fit in as the key item for the operator to communicate with the computer screen. Xerox PARC improved the mouse design with an optical rather than mechanical drive system in October 1981.

Steve Jobs and a number of Apple Computer's engineering staff were given a tour of PARC's new system featuring the computer mouse. They immediately licensed the mouse and incorporated it into Apple's new personal computers, starting in 1981. Apple used the mouse on its new Lisa computer in 1983, which spurred a number of other hardware and software makers to duplicate its integrated features. The real breakthrough for the mouse, however, came with the introduction of the Apple Macintosh computer in 1984. In particular, the MacPaint software enabled the user to create and edit graphics on the screen with the mouse. Because of the huge commercial success of the Macintosh, the mouse became the standard input device of choice for the entire PC market as well.

By 1984, the number of mouse licensees was nine (other licensees included The Mouse House, Logitech, Tymshare, Alps, and Microsoft), and the financial implications for SRI began to be apparent. Paid-up licenses in 1985 generated $45,000. In total, SRI received $150,000 in royalties before the license expired in November 1987.

How successful has the mouse become? In December 2008, Logitech shipped its billionth computer mouse.

Richard Knock, a member of the SRI Alumni Archival Team, wrote this article from information taken from SRI historical files.
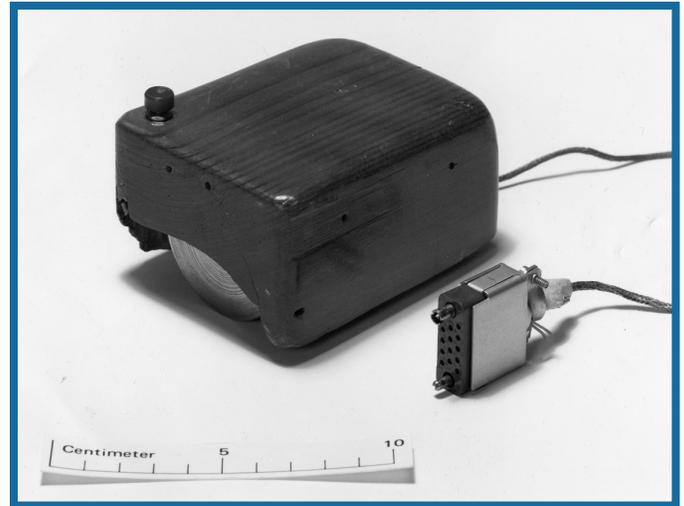
The first manual, tabletop, cursor-control mouse that led to the issuance of US Patent 3,541,541 in November 1970
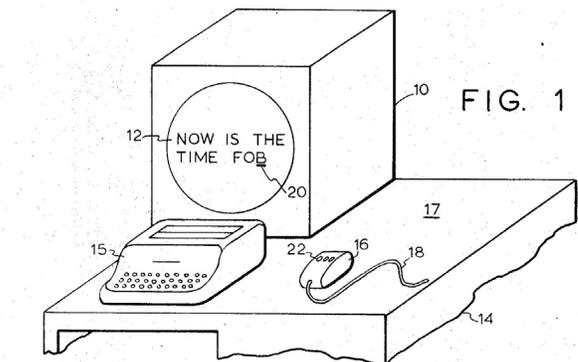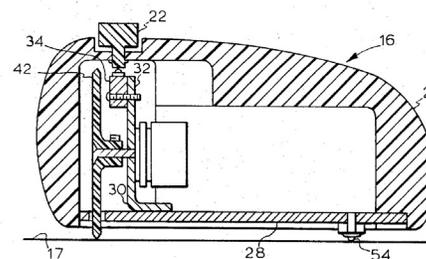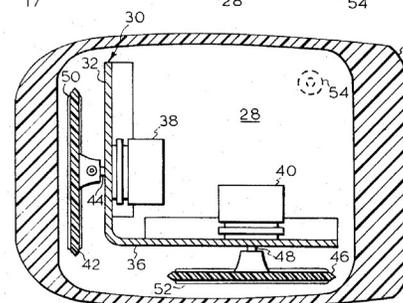
ALL-HANDS MEETING

Curt Carlson Holds All-Hands Meeting on the State of SRI

In late January, Curt Carlson held a meeting with the SRI staff to review the institute's progress and look forward to the future. The 10 years that Curt has served as SRI's CEO has been a time of major achievement—spin-off companies have reached billions of dollars in market capitalization, millions of dollars have come from technology licensing royalties, and multimillion-dollar programs are being conducted in such areas as atmospheric radar, drug discovery and development, school readiness, and artificial intelligence. SRI also established new locations and facilities to serve new markets and clients.

In 2008, SRI concluded another year of good financial performance and notable technical achievements. In 2009, SRI, like many other organizations, will be affected by changing government priorities, reduced or delayed private-sector spending for new products, potential difficulty in obtaining financing for ventures, uncertain investments from individual states, and fewer foundation resources. Yet SRI's focus on innovation and meeting important societal needs in energy, security, health, and education should serve the institute well even during this time of change. Moreover, the Obama administration's initial goal of doubling research funding during the next 10 years should be to SRI's advantage.

WE NEED TWINS!

Are You a Twin? Do You Know Any Twins? SRI's Center for Health Studies Needs Your Help!

Twins are uniquely valuable in research on the balance between the roles of genetics and environment in health. If you are a twin age 18 to 70, you can help researchers clarify the role of genetics in pain relief.

The Northern California Twin Registry, established in 1995 by SRI's Center for Health Sciences, is seeking fraternal or identical twins between the ages of 18 and 70 for a study about the effects of opioid therapy for pain. The study is being led by Stanford University School of Medicine and sponsored by the National Institutes of Health. It is being conducted at Stanford's Department of Anesthesia and requires a 1-day commitment. All information is kept strictly confidential, and you will be compensated.

Call 1-800-SRI TWIN (1-800-774-8946) to learn more.

RECENT DEPARTURES OF LONGTIME STAFF			
			Years of Service
January 2009	-	**James McCrumb**	**26**
	-	**Melissa Mettler**	**10**
March 2009	-	**Robert Riemenschneider**	**18**
	-	**Ronald Sevilla**	**30**
	-	**Andrea Smith**	**12**

NEWS FROM SRI

Sarnoff Researchers Create a Handheld Golf Ball Finder

According to the National Golf Foundation, 2,465,753 golf balls are lost every day in the United States. Ballfinder SCOUT™ is a small, handheld, digital video device that finds lost golf balls in seconds when as little as 1% of the ball (three dimples) is showing. Using the latest digital tracking/imaging technology, SRI subsidiary Sarnoff Corporation developed the device, which pinpoints the location of any standard white golf ball within a radius of 35 feet. It can search up to 600 square feet per second, using proprietary golf ball locating system technology to look for the unique white golf ball color signature. When it detects a ball, it vibrates and guides the user to the ball's location.

SRI Awarded DOE Contract to Demonstrate Power Generation from Biomass and Industrial Process Waste Fuels

The U.S. Department of Energy Industrial Technologies Program (ITP) has awarded a total of $30 million over 4 years for cost-shared research and development of industrial systems capable of using alternative fuels. The goal is to support innovative technologies that provide fuel flexibility options for manufacturers, thereby reducing natural gas requirements and emissions. The industrial sector is the largest user of energy domestically and depends on natural gas as a major source of fuel. ITP is promoting technologies based on alternatives to natural gas, such as gasified fuels, landfill and digester gas, and other opportunity fuels.

In a $1.2 million award, SRI and collaborators Satcon Technology Corporation, the University of Hawaii, and the Illinois Institute of Technology will demonstrate operation of their direct carbon fuel cell for power generation from alternative fuels. These fuels will include biomass (crop residues, farm waste, food processing waste, municipal solid waste, sludge waste, and wood/wood waste) and industrial process waste (coke, petroleum coke, and textile waste).

Using Buoys to Generate Power

SRI researchers have applied artificial-muscle technology to a wave-power-generating buoy and demonstrated it in Santa Cruz harbor. The buoy works a bellows-like span of special electrical conductive material to generate electricity. The device, jointly developed with the Japanese company HYPER DRIVE, uses SRI's rubbery electroactive polymer artificial muscle, which is able to generate electricity when it is stretched and then allowed to return to its original shape. The researchers said that, compared with other similar wave-power-generation systems, the polymer requires fewer moving parts, is more durable, and costs less to produce. The SRI demonstration revealed that many of these buoys could be used to harvest wave energy to help power an industrial park or feed into an on-shore electrical grid. The device now generates only small amounts of electricity, but future designs are expected to produce many kilowatts of electricity per buoy.

Houston Firm Buys Rights to SRI's Oral Formulations of Vancomycin

Houston start-up AuricX Pharmaceuticals has acquired from SRI the exclusive rights to oral formulations of the popular antibiotic vancomycin. Vancomycin is commonly used in hospitals to treat infections caused by certain antibiotic-resistant bacteria. The drug is currently administered intravenously; the oral form will enable patients to leave the hospital earlier and continue their treatment at home.

SRI will work with AuricX to get the new oral formulation approved by the U.S. Food and Drug Administration. Specifically, SRI will complete its formulation studies and fully optimize the oral availability of vancomycin. The approval process should be much shorter for the oral formulation than for a completely new drug. Pending FDA approval, the oral formulation could be on the market in 5 to 6 years.

SRI received up-front payments and will be eligible for success-based milestones and royalties on sales.

HISTORY CORNER

The Dish – A Fixture in the Palo Alto Landscape for More Than 40 Years

Constructed by SRI in the early 1960s for the U.S. Department of Defense and located on land leased from Stanford University, the 150-ft-diameter radio reflector antenna has become known locally as The Dish. When it


was erected, it was the third-largest antenna of its kind in the world. It has unique capabilities in frequency coverage, tracking speed, extracting weak signals from noise, and

transmitting range. At first it was used principally to beam signals to a number of very distant spacecraft probing the solar wind in a joint SRI/Stanford project.

Extensive refurbishing and upgrades began in the early 1990s and continue today, making possible expanded applications of the facility. Most recently, The Dish has been used for satellite calibrations, spacecraft command and telemetry, radio astronomy measurements, and weak-signal detection and the related diagnosis of spacecraft conditions.

The Dish is owned by the U.S. government and is operated and maintained by SRI. It is available for collaborative activities to qualified users. Several programs with Stanford University, the U.S. Air Force, the U.S. Naval Research Laboratory, and other government agencies are ongoing.

An SRI alumnus found this photograph of a team of researchers that appears to be from the 1960s, perhaps around the time construction of The Dish was completed. If you have any information about the photo or the history of The Dish, you are welcome to send it to us at the e-mail or mailing address shown on the first page.
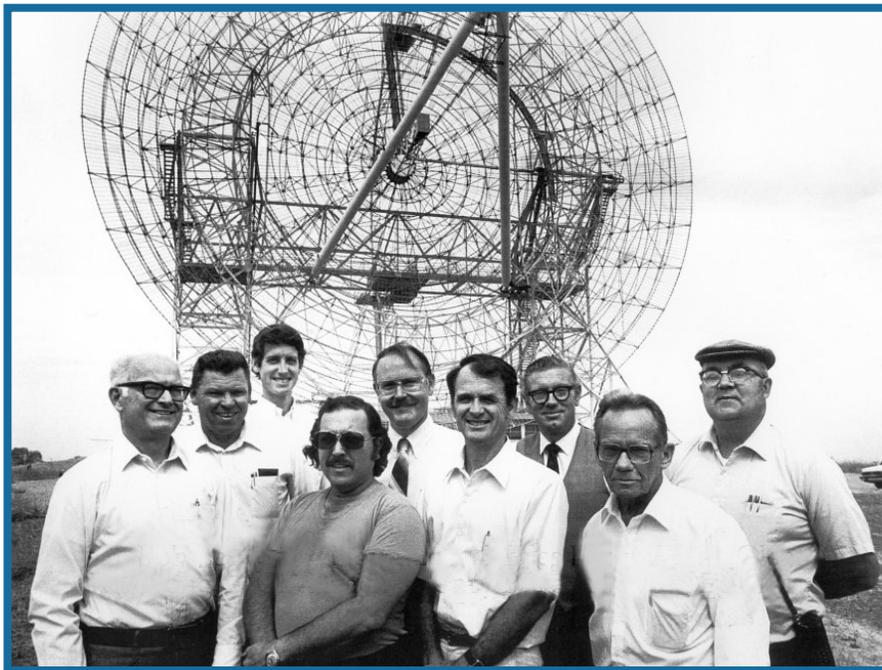
Front row, l to r: Roy Long, Gil Roach, Gary Price, Howard Zeidler; middle row, l to r: Bob Leonard, Doug Lee, Karl Lind, Hank Olson; back row: Bob Livingston

ALUMNI NEWS

2009 Spring Fling

 It's been five years since we visited the Computer History Museum in Mountain View. Since then, new exhibits have been added and new tours offered. So, it's time for a re-visit.

Join your fellow Alumni on **May 14, 2009**, to see what's new at the Museum. In addition, we will have the opportunity to hear **Judy Estrin**, the author of *Closing the Innovation Gap; Reigniting the Spark of Creativity in a Global Economy*, as she discusses her new book over lunch. Following Judy's presentation, you will be free to take in the sights of the museum individually or as part of a scheduled tour.

The Museum hours are 12 noon to 4 p.m.. Parking is free and readily available. Please join us at noon and follow the signs to our luncheon room. Box lunches and drinks will be provided.

The cost per person is $20.

For those Alumni seeking transportation to the museum, we will do our best to put together a select number of carpools. If you need a ride, please contact **Tom Anyos** at *tomanyos@aol.com* or drop a note to Tom Anyos at the Alumni Association, 333 Ravenswood Avenue, Menlo Park, CA 94025.

Complete the coupon on the enclosed flyer and return it to the Alumni Association to confirm your reservation.

Alumni Hall of Fame Plaque Installed in I Building

At the Alumni Association Annual Reunion in September 2008, **Pete Valenti** unveiled a handsome wooden plaque with brass nameplates for the SRI Alumni Hall of Fame members inducted through 2008.

The plaque has been mounted on the wall just inside the doors of the main hall of the I Building. A binder containing descriptions of the Hall of Famers and their accomplishments is on a table in front of the plaque. This is sure to be a highlight at the next reunion.

Seeking Nominations for the SRI Alumni Hall of Fame; Deadline Is June 30

The Alumni Association is seeking nominations for the SRI Alumni Hall of Fame. The purpose of this honor is to recognize the people who have made exceptional contributions to the enduring success of SRI. All former SRI staff members are eligible for nomination, and anyone may submit a nomination.

The following are the criteria for selection to the Hall of Fame:

- Significant and lasting contributions to the success of SRI

- Contributions recognized by staff, management, or clients

  – Contributions may be in any area of research, management, or service, such as establishing a new laboratory, a new field of research, or performing an outstanding recognized service.

- Clearly demonstrated qualities of leadership, vision, and creativity

- What did the person leave behind?

  – Enhanced reputation for SRI

  – New or enhanced research, business, or support activity or facility

If you know of someone worthy of membership in the Alumni Hall of Fame, please submit a nomination of 300 words or less describing the person's exceptional contributions to the enduring success of SRI. The deadline for nominations is June 30.

Submit the nomination to: SRI Alumni Association, 333 Ravenswood Ave., AC-108, Menlo Park CA 94025-3493. If you have questions, the alumni voice mailbox number is 650-859-5100.

New Alumni Members

The SRI Alumni Association welcomes new members:

Veronica Arellano
Jackie Bremer
Art Chait
Kevin Obrien
Jonathan Solnit
Kristin Wilson

We look forward to your participation in the Alumni Association and hope to see you at our next group event.

ALUMNI NEWS (Concluded)

SRI International Alumni Association
Cash Flow/Income and Expense
Year to Date, December 31, 2008

		Year to Date
Cash Balance, 12/31/07		**$18,847.94**
INCOME		
Cash income from membership dues and fees	$10,736.48	
Dividend income on bank account funds	$26.54	
Contributed funds:		
SRI Federal Credit Union	$2,500.00	
SRI International*	—	
Total Income	$13,263.02	**$13,263.02**
EXPENSE		
Services provided:		
SRI International:		
Report production services	$4,562.57	
Postage and mailing expense	$2,619.03	
	$7,181.60	
Special events and awards:		
Annual Reunion expense*	$289.63	
Spring Fling (visit to NASA/Ames)	$2,738.10	
Plaques and awards	$1,284.71	
	$4,312.71	
Other expenditures and expenses:		
Office supplies and other misc. expenses	$723.09	
Total Expense	$12,217.40	**$12,217.40**
Cash Balance, 12/31/08		**$19,893.56**[†]
Less Credit Union's 2008 contribution (not paid until 03/30/09)	$(2,500.00)	
Actual Bank Balance as of 12/31/08		**$17,393.56**

*A large portion of the reunion expense was funded by SRI; some additional cost may be billed in 2009.

[†]Includes archive funds in the amount of $3,302.00.

CREDIT UNION NEWS

"Is My Credit Union Safe?" — "Grab New Opportunities ... For A Richer Life" — "Convenience At Your Fingertips"

A few headlines in the Spring 2009 Credit Union Flyer enclosed with your April Credit Union Statement. Check it out for complete details.

Credit Union hours are Monday through Friday, 9 am to 4 pm. Just a reminder that the Credit Union will be closed on **Memorial Day**, Monday, May 25, 2009, **Independence Day**, Friday, July 3, 2009, and **Labor Day**, Monday, September 7, 2009.

IN MEMORIAM

Charles Austin

Charles Austin, a Systems Analyst in SRI's Pennsylvania office, died on February 9, 2009, at age 64. He began his career at SRI in 1999 and was a current staff member at the time of his death.

Jack F. Cline*

Jack Cline died of a brain tumor on August 17, 2008, in Palo Alto. He was 91 years old.

Jack was born and lived most of his youth in Michigan. He earned degrees from the University of Michigan, culminating in a Ph.D. in electrical engineering, and became a UM faculty member. He moved to Palo Alto and joined SRI in 1957, where he was a Staff Engineer in the Technology and Systems Development Division until he retired in 1984.

Jack's many interests included astronomy, genealogy, and music. He built his own telescope and also held an amateur-radio license. He traveled extensively with his family in Europe, Central and South America, and Asia, as well as throughout the United States.

He is survived by his wife, Laura, of Palo Alto; daughters Mary Cline of Portola Valley and Patricia Cline Cohen of Goleta; two grandchildren; and four great-grandchildren.

Elvin Daigle*

Elvin Daigle died on January 16, 2009, at his home in Channing House, Palo Alto. He was 93.

Elvin was born in 1916 in Sulphur, Louisiana, of an old Cajun family (d'Aigle). After high school, he became a mechanic, a service manager, and then a part owner of a Ford dealership in Sulphur. In World War II, he served as a Transport Corporal in the 70th Infantry Division and fought in the Battle of the Bulge in 1944.

In 1956, Elvin accepted a position with SRI and moved with his wife, Helen, and their three children to College Terrace in Palo Alto. At SRI, Elvin was an Explosives Technician and a Project Manager in the Poulter Lab, specializing in the civil applications of explosives. He moved on to Hewlett-Packard in 1973 and retired in 1992. A jolly raconteur, Elvin regularly amused fellow retirees at Channing House, where he and Helen had moved in 1994.

Elvin was preceded in death by Helen, who died in 2007. He is survived by daughter Jeanie of Palo Alto; daughter Charlotte of Santa Fe, New Mexico; son Ronald of Redmond, Washington; and two sisters, Helen Johnson of Sulphur and Barbara Heddins of Fruitvale, Texas.

Judith Ann Finck

Judy Finck died unexpectedly of a cerebral hemorrhage at her home in Mountain View on December 23, 2008.

Judy was born on May 8, 1943, in New York City and grew up in Ridgewood, New Jersey. She was a talented athlete, excelling as a child in swimming and horseback riding and later at tennis and golf. She graduated from Ridgewood High School and attended Queens College in Charlotte, North Carolina.

Judy started her career at Connecticut Mutual Insurance Company in Hartford, Connecticut, and transferred to the company's San Francisco office in 1968. She continued her career in business administration and database management in the San Francisco area at SRI as a Senior Secretary from 1971 to 1980. She later worked at Syntex Corporation and Roche International, from which she retired in 2005. In retirement, Judy was a dedicated volunteer for the Peninsula Humane Society. She loved animals of all kinds (especially pandas), but she particularly enjoyed working with dogs and cats and reuniting owners with their lost pets.

Judy is survived by her mother, Ann Finck, of Bloomfield, Connecticut; her brother and sister-in-law, Thomas and Carole Finck, of Vero Beach, Florida; her nephew, Jad Finck, of San Francisco; and her niece, Jenny Cardinali, of Milan, Italy.

Margaret Anne Gillum

Maggie Gillum died suddenly at her home in Redwood City on January 7, 2009.

Maggie grew up in Oroville, attended USF, and lived most of her adult life in Redwood City. She was an Administrative Assistant at SRI from 1977 to 1994 and later worked at ALZA/Johnson & Johnson.

An enthusiastic sports advocate and athlete since grade school, Maggie excelled at softball, volleyball, and badminton. She enjoyed camping, traveling, and partying; was a voracious reader and nuanced wordsmith; and was an excellent cook. She was a woman of generous and tender heart, quick temper, and independent spirit—loved by many.

IN MEMORIAM (Continued)

Maggie is survived by her beloved partner, Robert Prinz II; her sister, Dolores Gillum, of Felton; and her brother and sister-in-law, Steven and Musette Gillum, of Sebastopol.

Charles R. Kirkley*

Charles Kirkley died peacefully in his sleep on November 7, 2008, at age 70. Born in Staten Island, New York, in 1938, he was a long-time resident of Palo Alto and Mountain View.

After serving in the Army, he earned degrees in mathematics, electrical engineering, and computer science. While enrolled in a Ph.D. program at Stanford in the late 1960s, Charles began his career in SRI's Information Science and Engineering Division as a research engineer in computer science and artificial intelligence. He remained a consultant in Engineering through 1995, during which time he was also an instructor at Foothill College.

Charles is survived by his son, Tom Kirkley, of San Jose; his daughter, Sondra Glider, of Palo Alto; his brother, John Kirkley, of Oregon; his companion, Susan Edwards, of San Jose; and three grandchildren.

Ernest A. Lantz*

Ernie Lantz died on March 12, 2009, in Palo Alto. He was 81 years old.

A mechanical engineer and machinist, Ernie served in the Coast Guard in Alaska and worked at Hunter's Point Shipyard in San Francisco. He then worked at SRI as an Engineering Associate, full-time from 1973 to 1992 and part-time until 2002.

Ernie was an accomplished accordion player and bonsai gardener, but he was particularly known as an expert in repairing antique clocks, which he also collected. He was greatly in demand for both his musical talents and his clock repair and restoration skills. Ernie will be remembered for his kindness, generosity, compassion, and eagerness to help others.

Ernie is survived by his wife, Malle; sons Steve and David; granddaughters Linnea and April; brother Stone Lantz; nephews Buddy and Bobby; and stepsons Vince and Tony; as well as many cousins and friends in Sweden.

Kristin Mills

Kristie Mills died in Santa Cruz on September 4, 2008, of complications after cancer surgery. She was 60 years old.

Kristie was a Project Manager in the Center for Education and Human Services from 1999 to 2005. She was in a wheelchair and received her service dog, Buster, shortly after she started working at SRI. Many people probably remember seeing Buster get his daily exercise around SRI as several staff members took turns with this task. She is remembered fondly for her consistently upbeat attitude toward her coworkers and her work.

Kristie also worked for 30 years in community-based, nonprofit organizations serving persons with various disabilities. In her last few years, she was semi-retired and was writing her autobiography, *Wheeling Gypsy*.

Kristie was visited in the hospital by numerous friends from around the country and was with friends and family when she passed away. She is survived by her son, Canaan, and her brother, Dana.

Kendall Dean Moll*

Kendall Moll died quietly in his sleep on November 27, 2008, in Palo Alto from complications of Parkinson's disease. He was 81 years old.

He was born an identical twin on April 30, 1927, in Oakdale, California, and attended Oakdale schools, where his mother was a teacher and later principal. In 2002, he and his twin brother, Kenneth, were honored as distinguished alumni of Oakdale High School. They had enlisted in the U.S. Navy immediately upon graduation, just in time to witness the end of World War II. Both twins trained as electronics technicians in the new fields of radar and sonar technologies. Within a year, the Navy Department appointed him to the U.S. Naval Academy at Annapolis, Maryland; his twin brother was simultaneously appointed to the U.S. Military Academy at West Point, New York. Both graduated from their respective academies in 1950, and for more than 50 years they enjoyed the distinction of being the only twins ever to simultaneously attend rival U.S. military academies. After Kendall earned his Bachelor of Science degree with distinction in electrical

IN MEMORIAM (Continued)

engineering, he received a medical discharge from the military, prompting him to go immediately into graduate school and a lifelong career in academia. While working full-time and raising a family, he acquired a master's degree in electrical engineering in 1953 and a Ph.D. in decision analysis in 1968, both from Stanford University.

Kendall worked at SRI from 1953 to 1976. As Sr. Operations Analyst, he specialized in disaster preparedness, emergency planning, nuclear defense, and the development of emerging countries' economic and infrastructure plans. His career passions were management and negotiation, trade, and international relations. Throughout his long career, he traveled worldwide, often accompanied by his family. Notable postings included 2 years in Riyadh, Saudi Arabia, 18 months in Anchorage, Alaska, and a year in Fujinomiya, Japan. He was appointed to the faculty of San Francisco State University in 1981 and became Professor Emeritus of Management in 1991.

Kendall "loved to travel, especially with us," said his family. "He'd been to all 50 states, seen every sitting President since Truman, and was on every continent, including Antarctica. He swam in the Dead Sea and the Antarctic Ocean, kissed the Blarney Stone, ate the potentially deadly fugu fish in Japan, climbed a live volcano, and watched nuclear tests in Nevada wearing sunglasses. He was known for his unique sense of humor and love of adventure."

He is survived by his wife, Barbara; their sons, Martin of Chico, California, Howard of McMinnville, Oregon, and Stanton of Anchorage, Alaska; two brothers, Kenneth of Alexandria, Virginia, and Leo R. Moll, Jr., of Aptos, California; and two grandchildren, Michele and Jeremy.

Lloyd Charles Schuknecht, Jr.*

Lloyd Schuknecht died quietly in his sleep on January 22, 2009, succumbing at age 89 to respiratory failure after a short illness.

In the 1940s, Lloyd served in the Army Cavalry and then the Army Signal Corps, including service on General Douglas MacArthur's staff in Tokyo after World War II; he also served in the Korean War, where he was awarded the Bronze Star. He served in the Pentagon and with NATO in Naples, Italy, before retiring as a Lt. Colonel in 1964.

After retirement, he was recruited to be the Director of Security Services at SRI. During his tenure, he managed the redesign of computer and communications systems, guided the institute successfully through the protests against its involvement in defense research during the Vietnam War, and put on numerous conferences for SRI and for the American Society for Industrial Security. "He was the best boss we ever had," according to long-time colleague Darlene Sherwood. "Dad would have said that they were the best people he ever had to work with," said his son. "He couldn't say enough good things about the people or the work of the institute. His admiration and respect for them was incredible."

Lloyd retired from SRI in 1984. After his second retirement, he participated actively in sports and social service activities, especially after his wife, Dorothy, died in 1995. He was active until December 2008, when he was hospitalized with a leg infection. Friends and family visited him so frequently and for so long that one nurse remarked, "Boy, a whole lot of people really love this guy." Lloyd's ashes will be buried in Arlington National Cemetery this summer.

Lloyd is survived by his son, Lloyd C. Schuknecht III; his two daughters, Cynthia Schuknecht Sweeney and Christina M. Schuknecht; and a granddaughter, Catherine Claire.

Lloydd Shirley Taylor

Lloydd Taylor passed away on August 24, 2008, at age 87. Lloydd was a Senior Accounting Clerk at SRI from 1979 to 1994. A former resident of Los Altos, Lloydd moved to Coos Bay, Oregon, in 2007. She leaves behind two daughters, Katie and Pinky, and two sons, Richard and Matthew.

Edward F. Vance*

Ed Vance died on December 16, 2008, in Arlington, Texas, at age 79.

After graduating from Mansfield (Texas) High School in 1946, Ed joined the Army and then went to college on the GI bill, earning degrees in engineering and electrical engineering. After teaching for several years at the University of Denver, he joined SRI in 1959. At SRI, he performed research on electrostatic charging of aircraft and rockets, electrostatic initiation of electroexplosive devices, and electrical breakdown of air and vacuum. For more than 25 years, he was active in research and development on nuclear electromagnetic pulse (EMP)
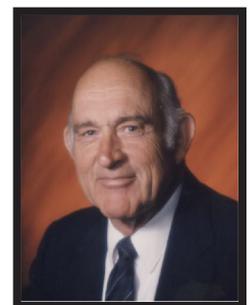
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and other transient interactions with systems and in the application and standardization of EMP protection. He contributed to several EMP handbooks and served on Department of Defense advisory panels on system hardening. He is the author or coauthor of numerous journal and conference papers, as well as more than 50 SRI technical reports. Although he "semi-retired" from SRI and moved to Texas in 1974, he continued working for SRI as a Senior Principal Scientist until his full retirement in 1994. Ed was named an IEEE Life Fellow in 1990 for contributions to the development of transient interference analysis and control.

Outside of work, over the years Ed enjoyed making wine and working in his yard and spent many hours maintaining his Studebaker cars. After moving to Texas, he designed and built his own house and raised beef cattle, as well as fruits and vegetables. He also enjoyed classical music, experimenting in the kitchen, doing crossword puzzles, and traveling in Europe.

Ed is survived by his wife, Gladys; and their children, Carolyn Vance of Champaign, Illinois; Cindy Paul of Greenville, Texas; Tom Vance of Austin, Texas; and Dana Vance of Austin, Texas. He is also survived by his sister, Mary Williams, of Rancho Cordova, California, and five grandchildren.

John E. Wagner*

John Wagner died peacefully on January 23, 2009, in Prescott, Arizona, at age 96.

John was Director of Personnel Services for SRI from 1953 to 1964, and he held similar positions at the University of California, Berkeley, and at Cutter Laboratories, Berkeley. After he retired to Arizona in 1972, his volunteer activities included service as an emergency medical technician, water commission and school board member; docent for the Sharlot Hall Museum, volunteer for the Yavapai Medical Center, and mentor for Big Brothers/Big Sisters.

John is survived by sons John J. Wagner of Napa and Marc H. Wagner of San Jose; his stepdaughter, Lenny C. Gemski, of St. Augustine Beach, Florida; and four grandchildren and seven great-grandchildren.

Yuan-Li Wu

Yuan-Li Wu, usually known as Y-L, died on November 18, 2008.

Y-L was born in Tientsin, China, in 1920, and studied briefly at St. John's University, Peking. Fleeing the Japanese, he continued his studies in Berlin. At the outset of World War II, Y-L proceeded to London for graduate studies at the London School of Economics. He received a Ph.D. from LSE in 1945. While in London, he met and married his wife, Connie, a refugee from Germany.

In 1945, Y-L took a job in New York with the United Nations, working on Chinese reconstruction plans. In 1951, he and Connie moved to Menlo Park, and Y-L joined the budding Economics Division at SRI as a Research Economist.

Y-L was a prolific writer on economic development, especially of China, Taiwan, and Hong Kong. One of his earliest works, *Economic Potential of Communist China, 1962-1970*, was republished in three volumes in 2005 by SRI. More than 20 books published from 1956 to 1997 list him as author or coauthor. Y-L himself was the subject of a 2003 biography, *Junzi, A Man of Virtue*, by Chu and Lee.

Y-L also became a Professor of Economics at the University of San Francisco and was a Senior Consultant in Economics and International Business at the Hoover Institution on the Stanford campus.

Y-L retired in 1990 but continued to lecture and consult. He and Connie moved to Channing House in Palo Alto in 1992, where she predeceased him. Survivors include their daughter, Suzy.

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*Member of the SRI Alumni Association