SRI Alumni Association

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April 2011 Newsletter

MESSAGE FROM PRESIDENT BOYD FAIR

Boyd Fair

Welcome to the first Alumni Newsletter of 2011. This has started out to be a historic year with the horrific recent events in Japan and all the weather-related problems across our globe. The Alumni Association's thoughts and prayers go out to all SRI alumni and friends who have been affected by these events, and we hope for better times in the future.

While all this has been occurring, SRI has embarked on its 65th year of research and development. Did you know that SRI revenues are now in the neighborhood of $500 million per year? Or that the staff size has grown to approximately 2,100? The organization has certainly changed from when I worked there during the 20th century. Find out more inside.

As always, SRI continues to obtain new and important projects. Three new programs are highlighted in this issue. Under DOE sponsorship, SRI will develop enhanced tools to accelerate bioenergy research, building on its highly popular bioinformatics databases developed in the past.

The National Heart, Lung, and Blood Institute has awarded SRI two new preclinical service contracts worth over $17 million. On the first contract, SRI will provide rapid, cost-effective studies for potential therapies and treatment regimens. The second project will provide a Non-Biologics and Small Molecules Production Facility for the SMARTT Program. To understand what I just said, read the articles inside.

And I am sure that you will be interested in the third new activity. SRI has signed a strategic alliance partner agreement with the Applied Science Foundation for Homeland Security. Under this program, SRI will work with other partners to develop procedures, products, and training techniques to allow maritime and port authorities to deal more effectively with natural disasters and other emergencies.

Now for a test! Did you know that two SRI researchers have recently been named as IEEE Fellows? Guess who the winners of this very prestigious award are, or turn the page and find out inside.

Also, Jake Feinler has put together a write-up about the ARPANET Network Information Center, which resided at SRI for many years. During the early days, many contractors, including SRI, were developing networking hardware, software, and protocols, some of which were tested and discarded but many of which have become standards and are now used in the worldwide Internet. This work has to rank high on the list of major research activities of the 20th century.

On a lighter note, Peter Miles writes about his family's trip to Pernambuco, Brazil. It is always enjoyable to read what our colleagues are doing with their free time, and I encourage other alumni to submit short articles about their hobbies, trips, or special events in their lives for future issues of the newsletter.

Kudos to Linda Hawke-Gerrans for the nice changes she has made to the newsletter format. It is consistent with the new SRI Web design and offers more space for our articles. Well done, Linda!

Finally, don't forget to sign up for this year's Spring Fling. Time is short, so fill out and return the form that is included in this mailing. The Steering Committee thinks you will enjoy this unique outing. I'll be looking for you on the bus!

Boyd

The Spring Fling is May 12, 2011, at the Walt Disney Family Museum. See announcement on page 9. The flyer for this event is enclosed with this mailing.

SRI Is Sound and Growing in Its 65th Year

SRI begins the year of its 65th anniversary in solid financial health, with broader capabilities to offer now that Sarnoff has been fully integrated, and with optimism.

Financial and Staff Growth

Under President and CEO Curt Carlson's leadership over the last decade, SRI has grown in financial performance and staff. Since 2001, SRI has tripled its bookings and nearly doubled the staff, with 2,100 people today. Revenues have climbed to almost half a billion dollars. SRI is benefiting from its commercialization activities, and staff members are benefiting directly from the royalty- and equity-sharing program.

Expanded Capabilities

Sarnoff Corporation in Princeton, New Jersey, SRI's wholly owned subsidiary since 1987, is now fully integrated into SRI. The integration was prompted in part by a shift of Sarnoff's client mix to more government than commercially funded work. Both organizations have similar business models of client-sponsored R&D plus technology licensing and spin-off ventures.

The integration expands SRI's capabilities, resulting in more comprehensive offerings to clients. Some notable examples are the Products and Services Division within the Engineering and Systems Group, Vision Technologies in the Information and Computing Sciences Division, and the Optoelectronics Program in the Physical Sciences Division. For highlights of past SRI Sarnoff innovations, see the History Corner section.

Products and Services — This division, set up in 2008 from a consolidation of various such efforts at Princeton, has a very strong interest in the development, sale, and servicing of products. It has been very successful and is growing rapidly. The government being its major full-service client, the division serves important niches in military-oriented situational awareness, video vision, and security systems. Six product lines are now active:

- Acadia® video processors, which enhance ordinary video under difficult conditions, such as very low light
- Iris on the Move® biometric identification systems that capture an iris image at a distance of up to 3 meters while the subject is in motion
- Integrated sensor solutions
- TerraSight™, a real-time multisensor battlefield awareness system
- Video test and measurement tools that have been prominent at Sarnoff for decades
- Generalized emulation of microcircuits.

For both efficiency and customer service, the division is matrixed and process driven. The matrix enables cross-fertilization in product development and more responsive customer and field support, including training and logistics. It is capable of a working through the entire product life cycle.

Vision Technologies — Vision Technologies has been in existence for 28 years. The lab's major field of interest is to see, understand, and remember what imaging and other sensor systems are showing in real time, in the real world, and while on the move. Over the years, this group has pioneered many vision-related technologies. In moving from photons to image understanding, the lab uses four levels of processing: image capture, image processing, determining scene structure, and developing scene understanding. The last technology includes video compression techniques based on object identification and tracking. Applications include aerial video surveillance, robotics, 3D modeling, and medicine, to name a few. Vision Technologies also is involved in the development of many of the vision modules used in the Products and Services Division.

Optoelectronics — This area of technology has been a very traditional one from the RCA Labs days. This legacy affords the program an excellent reputation in laser diodes, microfluidics, and, more recently, flexible displays. This group has an excellent understanding of the fundamentals of optoelectronics that extends even to quantum-level sensors, gamma ray imagers, and ultra-high-resolution 3D imaging.

Optimism for Year 65

Although this year poses ongoing challenges such as shifting government priorities and shrinking agency budgets, the pioneering research, technology advances, and product and service solutions that SRI and Sarnoff are known and respected for show no signs of diminishing. Curt Carlson has expressed his conviction that this spirit of innovation will continue to make SRI successful.

Ajay Divakaran and Andreas Stolcke Honored as IEEE Fellows

Ajay Divakaran, Ph.D., technical manager, Vision Technologies, and Andreas Stolcke, Ph.D., former senior researcher in the Speech Technology and Research (STAR) laboratory, have been named 2011 IEEE Fellows.

IEEE is the world's largest professional association dedicated to advancing technological innovation and excellence for the benefit of humanity. The Fellow distinction is its highest membership grade, conferred by the board of directors on selected members for their extraordinary record of accomplishments in the IEEE fields of interest.

Ajay was honored for his contributions to multimedia content analysis. This work has enabled the automatic indexing of broadcast video so that users can pull snippets of content of interest. He has wide-ranging expertise in analyzing diverse audiovisual content for understanding and locating key events.

In addition to audio analysis, Ajay is working on vision technologies, particularly on people, vehicle, and vessel tracking and fingerprinting. He led the development of SRI Sarnoff's ACT-Vision, the world's first commercialized multicamera hand-off and tracking system. He also led the development of SRI Sarnoff's vehicle and vessel fingerprinting systems. He is currently working on technology to track people in dense crowds, multimodal training systems, automatic food identification and volume assessment, classification of audio captured in varying environments, and audio source separation.

Andreas was honored for his contributions in statistical language modeling, automatic speech recognition and understanding, and automatic speaker recognition. He has expertise in detailed statistical models of speech and natural language, combining modeling at the levels of words, prosody, pronunciation, and acoustics for more accurate recognition of speech, speaker identity, and speaker intent.

At SRI, Andreas was involved in key speech technology projects, such as recognition and understanding of interactions in multiparty meetings for DARPA's Personalized Assistant that Learns (PAL) program, and new feature extraction and modeling techniques for SRI's speaker recognition system. He also designed SRI Language Modeling (SRILM), an open-source toolkit for statistical language modeling that is widely used in the research community.

Mary Tanga Receives 2010 Mimi Award

Mary Tanga, senior director of the Center for Infectious Disease Research, received the Mimi Award in 2010. She was honored for her special ability to make people feel appreciated and respected and for encouraging their professional development. Nominators noted that she instills the confidence in her staff members to overcome technical hurdles and find solutions and that her faith in them contributes to their faith in themselves. One of her nominators perhaps said it best: "She is the embodiment of the professionalism, inspiration, and enthusiasm that the Mimi Award was created to recognize."

The Mimi Award is the highest recognition offered to SRI staff members who inspire coworkers and contribute to their professional development and success. The award was established in memory of Marian (Mimi) S. Stearns, who was SRI's Vice President, Health and Social Policy Division (now called the Policy Division) from 1990 to 1994.

SRI Awarded National Institutes of Health Contracts to Advance Development of Treatments for Heart, Lung, and Blood Diseases

SRI has been awarded two preclinical services contracts totaling $17.4 million by the National Heart, Lung, and Blood Institute (NHLBI). Cardiovascular, lung, and blood diseases were the cause of 43 percent of all deaths in the United States in 2006, and the economic burden for these diseases is projected to be $705 billion this year—23 percent of the total economic costs of all illness, injuries, and death. SRI will support NHLBI's Science Moving towArds Research Translation and Therapy (SMARTT) Program to provide resources for translation to the clinic of novel therapeutics to treat heart, lung, and blood diseases.

Under the first contract, SRI will lead a Pharmacology and Toxicology Center that will work with NHLBI and other organizations to provide rapid, cost-effective studies for potential therapies. Researchers will conduct pharmacology and preclinical studies with candidate drugs to obtain data on treatment regimens and efficacy needed to support U.S. Food and Drug Administration (FDA) applications for new medications.

Under the other contract, SRI will provide a Non-Biologics and Small Molecules Production Facility for the SMARTT Program. The overall objective of the contract is to support translational research and provide services as an FDA-defined current good manufacturing practice (cGMP) facility. Researchers will focus on the production and testing of therapeutics to treat heart, lung, and blood diseases.

SRI's research groups have more than 40 years of successful experience on similar production facility programs for the National Institutes of Health.

SRI Receives Department of Energy Grant to Enhance Bioinformatics Tools for Renewable Energy Research

Under a $1.25 million grant from the Department of Energy (DOE), SRI will develop enhanced tools to accelerate research on bioenergy, or renewable energy from biological sources. Specifically, SRI will expand its MetaCyc database and enhance its Pathway Tools software.

SRI's MetaCyc is the largest database of experimentally determined and literature-curated metabolic pathways available. Pathway Tools is a collection of software tools that predict the metabolic pathways of organisms from their sequenced genomes and generate organism-specific pathway databases by comparing the genome annotation of each organism with the pathways within the MetaCyc database. The software also helps researchers query, visualize, analyze, and curate pathway databases.

SRI will expand the MetaCyc database to include energy-related metabolic pathways and enzymes associated with lignocellulosic biomass degradation, hydrogen production, and microalgae oil production. This expansion will allow the Pathway Tools software to recognize bioenergy-related pathways in sequenced microbes, resulting in more accurate metabolic pathway reconstructions. This information will enable scientists to develop new ways to produce fuel and other valuable products from biomass and microorganisms.

More than 2,000 researchers in government, academia, and industry already use SRI's bioinformatics databases and software tools to accelerate research leading to advances in biotechnology, including the development of new drugs and new routes to important chemicals. This project will give SRI's bioinformatics tools even greater utility in the emerging area of bioenergy.

SRI and Applied Science Foundation for Homeland Security Are Partnering to Provide First Responders with Technology Solutions

The Applied Science Foundation for Homeland Security is a not-for-profit organization that focuses on accelerating the transfer of technology into products and systems that support first responders and other homeland security personnel. The Foundation and SRI have signed a strategic alliance partner agreement to collaborate on the development, testing, and fielding of technology to meet the needs of federal, state, and local first responders. The goal is to rapidly and efficiently place capable communications systems where they need to be in emergency situations—in the hands of first responders and security operators.

SRI will work with the Foundation and its resident research partners to create and commercialize products and to provide training capabilities to allow for easier, more effective communications during emergencies and disasters. SRI's programs in maritime and port security, military and first responder interoperability training, cybersecurity, disaster resiliency, interoperable communications, and biometrics all apply to this mission.

RECENT DEPARTURES OF LONGTIME STAFF

			Years of Service
January 2011	-	Stanley Holme	14
February 2011	-	Seiki Chiba	16
	-	Lynn Johannesen	34
	-	Robert Leal	11
	-	Elizabeth Shriberg	21
	-	Andreas Stolcke	17
March 2011	-	Marilyn Gillespie	11

A Timeline of SRI Sarnoff's Remarkable Achievements

Since its founding in 1942 as RCA Laboratories, SRI Sarnoff has been changing the world. Medicine, technology, security, manufacturing, entertainment, communications media, and more have been revolutionized by SRI Sarnoff innovations over the decades. Here are some highlights.

1940s

- Brought high technology to the U.S. military in World War II. Developed phosphors for the first cathode ray tube (CRT) radar screens, as well as video-guided missiles, navigation systems, infrared cameras, and microwave communications.
- With radio frequency heating, revolutionized methods for medicinal manufacturing, beginning with penicillin.
- Transformed an entire industry with the image orthicon "Immy™" camera tube. The Emmy® Award was named for it. SRI Sarnoff has won nine Emmy Awards (see sidebar).

1950s

- Pioneered the world's first color television standard, the fundamental technology and design of which remained in place for more than 50 years.
- Invented the magnetic tape used for recording monochrome and color video.
- Introduced other advancements from Electronic News Gathering (ENG) and the Typhoon supercomputer to high-frequency transistors for consumer electronics.

1960s

- Discovered the basic chemistry and first applications for liquid crystal displays (LCDs), paving the way for today's flat-panel displays.
- Pioneered CMOS integrated circuits (ICs), a vital technology that can be found in a majority of the world's electronic circuitry.
- Created the process of liquid phase epitaxy for mass production of lasers, as well as the all-solid-state imager.

1970s

- Enabled fiber-optic communications through work with lasers—increasing their life span, making possible new applications and revolutionizing telecommunications.
- Developed silicon-related intellectual property spanning from integrated circuit fabrication to solar electricity generation.
- From work with the space program, produced microwave devices for satellite communications.
- Adapted charge-coupled device (CCD) technology to commercial applications such as camcorders and digital still cameras.

1980s

- Advanced research in the fields of vision and video—pyramid technology and real-time video processing, the first CCD broadcast camera, the Princeton Engine supercomputer.
- Introduced digital disk recording and emulation technology.

1990s

- Changed the face of consumer electronics with digital satellite broadcasting and HDTV.
- Created testing and quality control measures for video decoder compliance verification and offered software that turned live video into panoramic still images.
- Shrank entire technologies down to single chips, creating advancements in healthcare, imaging, safety, and communications.

2000s

- Invented walk-through iris recognition systems, mobile stray voltage detection, and the world's first disposable hearing aid.
- Imagers have captured pictures of the most distant object yet discovered in the solar system.
- Created the world's fastest vision processor and incorporated it into cutting-edge vision applications for the military and forensics.

SRI Sarnoff's Nine Emmy Awards

SRI Sarnoff has won nine Emmy Awards for its fundamental technical contributions to the development of analog and digital television.

1955	For the RCA Tricolor Picture Tube, world's first color display for TV receivers
1980	For the development of the first commercial broadcast camera with automatic setup
1983-84	To Vladimir K. Zworykin for 50 years of pioneering conception and innovation, including the first practical tube for picture transmission
1985	For the world's first commercially available solid-state broadcast camera
1985-86	For the development of multichannel stereo sound for television
1986	For pioneering effort in the development of component video recording technology for broadcast television
1997	Shared award for the development of the Grand Alliance digital television (DTV) system, now adopted as the ATSC standard
1998-99	For MPEG Compliance Bitstreams, a software tool to prove the performance of digital television receivers and monitor DTV transmission systems
2000	For JNDmetrix™, a technology that provides quantitative measurement of perceived picture quality, used in DTV quality analysis equipment

The Early Role of SRI in Developing Host Tables and Top-Level Domain Names

By Elizabeth (Jake) Feinler
Retired Director of the SRI Network Information Systems Center
and
PI of the NIC Project 1974–1989

This article is excerpted from a longer paper Jake wrote detailing the roles of the many government agencies, organizations, and individuals who contributed to naming and addressing during the infancy of the ARPANET.

The Host Table and Assigned Numbers List

Bolt Beranek and Newman Inc. (BBN) in Cambridge, Massachusetts, was under contract to the Defense Advanced Research Projects Agency (DARPA) to provide and manage the ARPANET Interface Message Processors (IMPs) and to provide the ARPANET Network Operations Center. BBN would assign a new host an IMP port number and often ask the site attaching the host computer to the IMP what name it would like to be called. Ellen Westheimer at BBN published a descriptive list of what BBN thought was attached to each IMP.

In 1971, Peggy Karp at MITRE Corporation in Bedford, Massachussetts, suggested a standard format for a host table. This led to a discussion that resulted in the ARPANET Network Information Center (NIC) at SRI being designated the official host name registry for the ARPANET, a service it provided until the Internet went commercial in the 1990s.

BBN forwarded IMP port information to the NIC. The NIC contacted the site for other information needed for the host table and verified that the name chosen was not already in use and that it met network guidelines. At first the host table was not machine readable, and each site tended to adapt it to suit its machine types. Peter Deutsch at the Xerox Palo Alto Research Center (PARC) suggested that the host table be standardized and made machine readable. The NIC proceeded to define an online, machine-readable standard for the host table in March 1974.

In September 1974, Jonathan (Jon) Postel joined SRI, and part of his DARPA contract activity was to serve as a member of the Network Working Group (NWG). The ARPANET was still in its early stages of evolution. Many technical decisions came from the NWG and were usually issued as technical notes called Requests for Comments or RFCs. The NIC was the official repository for the RFCs, and Jon had become the unofficial editor of them. In 1972 Jon and Vinton Cerf, both then at the University of California at Los Angeles (UCLA), had issued an RFC entitled Well Known Socket Numbers. Jon continued publishing updates to this list after he joined SRI. This list eventually evolved into the Assigned Numbers list, which Jon also maintained and updated.

The host table, however, was maintained by me and others at the NIC. Each list handled aspects of naming. Both activities were taking place in one SRI group under one DARPA contract, so this was not a problem.

In 1977, Jon left SRI to join the University of Southern California's Information Sciences Institute (USC-ISI). By this time, both the Assigned Numbers list and the host table had grown significantly. Jon was funded by DARPA, whereas the NIC was funded by the Defense Communications Agency (DCA). Jon and his assistant, Joyce Reynolds, continued to manage the Assigned Numbers list that was now at USC-ISI, while the NIC managed the host table. Jon also administered the country code, .us domain, global IP address allocation, and root zone management for the experimental domain naming system (DNS), and he became the formal editor of the RFCs.

Meanwhile, the host table at the NIC was evolving into the DNS registry. This created a somewhat arbitrary split in naming, so in 1987 administration of the Assigned Numbers, global IP address allocation, and root zone management were transferred to the NIC contract. At that point, the NIC became the naming and addressing registration authority for the ARPANET/DDN Internet. Mary Stahl, and later Sue Romano Kirkpatrick, were Task Leaders for this work.

The Domain Naming System

The host table was for many years a centralized "flat" ASCII text file that hosts downloaded from the NIC Name Server. However, the host table continued to grow until the host addresses were about to exceed the address space allotted to them in the packet headers, and the table itself was too large for small hosts to house in its entirety. Moreover, maintenance of a single centralized host table had become cumbersome and inefficient and did not serve the needs of the expanding Internet.

USC-ISI led the effort to come up with a new hierarchical domain naming scheme. The DNS that was ultimately adopted was a hierarchical system distributed in its data capture and maintenance, as well as in its administration. It uncoupled names from addresses and could be applied to different networks with different protocol suites. It also provided improved capabilities for mail relaying.

The transition from the flat ASCII text host table to the hierarchical DNS took place in stages over time. The ARPANET transition first began in 1983. Later, in 1987–88, the Defense Data Network (DDN) finally made its transition to the DNS. During the transition, the NIC implemented the new DNS system and maintained two host tables—the old and the new.

Top-Level Domain Name (TLD)

Early in the cutover to the DNS, DARPA and DCA jointly decided to add the domain name .arpa to the end of every existing host name in the host table as a test domain to try out the new hierarchical concept. Several sites were not particularly happy to have .arpa as part of their host name, as they had no direct association with that agency. Consequently, the NIC and DCA received many calls and complaints. Also, once it was announced that there would be a hierarchical domain naming system, the NIC was approached by people insisting that their organization or agency be awarded a top-level domain name, or TLD.

I could foresee real problems if actual organizations were chosen as TLDs. In my opinion, this could have opened a can of worms as to who or what got to be a TLD. DCA was leaning toward making the DDN a TLD and changing all DDN network names from .arpa to .mil to better depict the military community. Although the ARPANET/DDN was a military network, many hosts on it were not military, nor were they located at military sites. Adding .mil to their names would have been as unpopular and confusing as .arpa had been. Also the DNS naming scheme was designed to reach out to other domains that were government, but not military, such as the National Science Foundation (NSF).

Therefore, the NIC suggested that the TLDs be generic categories, of which .mil would be one, and that others such as .edu, .gov, .org, and .com be added. The idea was that anyone wanting a host name would have to choose the generic TLD that best suited the organization behind the name. DCA agreed with this approach and approved it.

Integrating the Work

Meanwhile, a lot was happening at DCA. The agency was being reorganized, and many people were coming and going. Many of the new people were not familiar with the style of doing things on the network. Some considered the DNS experimental and so not appropriate for an operational military network. Others barely knew what host tables and name servers were. DCA was even being advised to classify the host table!

Jon and I decided we needed to have a joint meeting to try to bring all the factions together. The meeting was heated, with a lot of back and forth. However, it was finally agreed that all would benefit from one Internet working group and a joint approach to naming and addressing. We agreed to use the Namedroppers mailing list for discussion and to combine the efforts of DCA and DARPA into one overall working group, which led to the start of the Internet Engineering Task Force (IETF).

The generic TLD approach of .mil, .gov, .org, .edu, and .com that the NIC came up with seems to have worked reasonably well and remains in use today.

Postscript

I have donated all the NIC and early Internet papers I could find to the Computer History Museum in Mountain View, California—more than 350 boxes. I am a volunteer there, and we are working to get the collection into the database and the interesting things scanned. All the old RFCs are available online at http://www.rfc-editor.org/rfc-index.html. If you have old notes or papers or files pertaining to the early days of the Internet you think might be important, I urge you to check with Marc Weber, the Internet Curator at the Computer History Museum, before you throw them away.

Also, it would be great if people like Paul Mockapetris, Joyce Reynolds, Kevin Dunlap, Mike Karels, Ken Harrenstien, David Roode, Mary Stahl, Mark Lottor, Sue Kirkpatrick, Jose Garcia-Luna-Aceves, Craig Partridge, Mike St. Johns, Mike Corrigan, Dave Crocker, Vint Cerf, Dick Watson, Heidi Heiden, Alex McKenzie, and the many participants of the Namedroppers working group added their recollections so we can finally know the early history of naming and addressing on the Internet. It was quite a story of technical collaboration!

New Year's in Pernambuco

By Peter Miles

Our Bolivian daughter-in-law, Bruna, bestowed upon her son, Lucas, age 3, in August last year a sister, Lara. To celebrate, our family was invited to spend the New Year vacation on the tropical island of Itamaraca, where Bruna's family owns a condominium with swimming pool and sea access. We arrived via Lisbon and exchanged the freezing temperatures of England for a balmy 25 to 30°C.

Lara with Father Christmas

Itamaraca (rock that sings) is 50 km north of Recife, the capital of Pernambuco State in northeast Brazil. It is primarily a holiday resort with superb sandy beaches and much fishing activity. Its historic standouts are Fort Orange, a fortress constructed by the Dutch in 1631, and the Church of our Lady of the Conception, which vies with the nearby church of Igarassu for the honour of being the oldest in Brazil (1535).

A Portuguese armada under Pedro Cabral heading for the Indies discovered and claimed this region of Brazil as early as 1500. During the 16th century, the Portuguese developed cane sugar plantations, largely using slave labour imported from Africa because the Jesuits defended converted local Indians against such exploitation.

We visited Olinda (lovely!), the delightful town on the hill that was the first capital of Pernambuco during the captaincy of Duarte Coelho. With its 16th and 17th century convents, churches, and slave market, Olinda is now a UNESCO World Heritage Site.

We made several expeditions to Recife, the Venice of Brazil, a vibrant port city dissected by numerous waterways and connected by many bridges. Of its 1.5 million inhabitants, one-third inhabit its string of imposing skyscrapers that resemble the Manhattan landscape, but the majority live in dire poverty. Among the many churches, palaces, museums, and historic mansions, we discovered in Old Recife the Rua Dos Judeus, the street that from 1636 to 1654 housed Kahal zur Israel, the first synagogue of the Americas. Pedro Cabral had brought with him a Polish Jew, Gaspar da Gama, as interpreter, and the Jewish community developed rapidly and was supported under the subsequent Dutch occupation. After the Portuguese reconquest in 1654 and the Inquisition, the Jewish community had to flee and partly resettled in North America in a place they called New Amsterdam, now New York City. The street was renamed Rua do Bom Jesus!

We also admired in the midst of a wonderfully preserved park the Francisco Brennand Museum, with its many ceramic sculptures, reminiscent of Picasso and Gaudi, created by this living artist. Nearby, Brennand's cousin had converted a medieval castle in a forest with scattered lakes into the Ricardo Brennand Art Gallery and Library, commemorating the liberal Dutch occupation of Brazil.

As a special treat, Bruna's uncle Gualberto invited me to join him on a flight inland to Petrolina to visit his Botticelli farm. Together with an Italian entrepreneur, Gualberto has established a flourishing agricultural and horticultural project on a 2,000-hectare site converted from desert through irrigation from the São Francisco River. At his winery, 200 hectares of grapes yield 1.5 million litres of wine—three times the European yield because of the three harvests that are possible per annum. He also has pomegranate and mango orchards. At the farmhouse, with its enticing pool, little monkeys occupy the rafters. Some 500 hectares of the farm are leased to local farmers who repay Gualberto for the land and water he provides with 20% of their annual produce. Some 250 persons thus have useful employment in a very poor region.

We left Brazil not only with an enviable suntan, but also impressed by the vibrant and creative spirit of its people, which will surely, in the not too distant future, raise this blessed country to its rightful place of importance in the world.

Save the Dates!

Menlo Park 2011 Spring Fling: Walt Disney Family Museum, Thursday, May 12

Enclosed with this newsletter is the sign-up sheet for our visit to the Walt Disney Family Museum at the Presidio of San Francisco on Thursday, May 12. We hope that all local alumni and those who will be visiting the area will be able to attend. It should be a most interesting day. And remember that SRI has a tie to the Disney dynasty. SRI's Buzz Price determined the best location for Disney's first park in Anaheim.

The fee covers bus transportation and entrance fee, and you may order a box lunch. See the flyer for details.

An SRI Alumni Steering Committee member recommends the documentary movie *Waking Sleeping Beauty*, which covers Disney history from the 1970s through 1990s. It apparently is fascinating, covering the careers of top animators and showing lots of historical footage. Seeing it should be worthwhile and entertaining even if you cannot attend the Spring Fling.

Menlo Park 2011 Annual Alumni Reunion: Thursday, September 22

The 2011 Annual Alumni Reunion will be held in the International Building on Thursday, September 22. Look forward to the great conversation, delicious food, interesting updates on SRI, and—of course—door prizes.

Alumni Association Annual Dues to Increase in Calendar Year 2012

After many years of remaining unchanged, the Alumni Association dues will increase by a modest $5 in 2012, to $20 per year. The association is obliged to do this to recover the rising costs of printing and mailing the newsletter and member directory.

DIRECTORY ADDENDUM

The enclosed directory addendum (covering the period December 4, 2010, to March 31, 2011) contains new members and corrections. Please add it to your 2011 Directory.

Nominations Open for the SRI Alumni Hall of Fame

Do you know someone who made an exceptional contribution to the success of SRI? Now is the time to nominate that person for the SRI Alumni Hall of Fame. All former SRI staff members are eligible. Nominations are due June 3, 2011.

Send a write-up of about 300 words describing how your candidate meets the Hall of Fame criteria:

- Significant and lasting contributions to the success of SRI
- Contributions recognized by staff, management, or clients
- Contributions in any area of research, management, or service, such as
  - Establishing a new laboratory or a new field of research
  - Performing an outstanding recognized service
  - Clearly demonstrating 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

You may find examples of write-ups at http://alumni.sri.com/fame.html

Please send your nominations by June 3, 2011, to steering-committee-alumni@sri.com or SRI Alumni Association, 333 Ravenswood Avenue, AC-108, Menlo Park, CA 94025-3493.

WELCOME

The SRI Alumni Association welcomes new members:

Donald Doran
David Harvey
Kathryn Salmanowitz
Andreas Stolcke
Elizabeth Shriberg Stolcke

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

SRI International Alumni Association

Cash Flow/Income and Expense

Year ending December 31, 2010

CASH BALANCE as of 12/31/09		**$18,439.61**
INCOME		
Cash income from membership dues and fees	$8,941.75	
Dividend income from bank account funds	$11.14	
Contributed funds		
SRI Federal Credit Union	$2,500.00	
SRI International	$2,000.00	
Total Income	$13,452.89	**$13,452.89**
EXPENSE		
Services provided by SRI International		
Report production services	$4,516.79	
Postage and mailing expense	$2,139.17	
	$6,655.96	
Special events and awards		
Annual Reunion		
Food and beverage	$4,881.59	
Caps and visors	$1,721.98	
Spring Fling (California Academy of Sciences)		
Entry fee	$746.24	
Lunch	$213.75	
Transportation	$1,941.81	
	$9,505.37	
Other expenditures and costs		
Office supplies	$48.17	
Miscellaneous expense	$54.83	
	$103.00	
Total Expense	$16,264.33	**$16,264.33**
CASH BALANCE as of 12/31/10		**$15,628.17**

Donald Anton

Donald Anton, a Mail Messenger at SRI for more than 40 years, died February 27, 2011, at age 66, after being diagnosed the previous week with pancreatic cancer. Most staff at SRI came into contact with Don over the years. He was always attentive to staff members' needs and went out of his way to help with mailings, pickups, deliveries, and special requests. His friendly, helpful presence will be greatly missed by everyone at SRI.

Patricia Thomson Carlson

Patricia Carlson, a Research Assistant at SRI from 1970 to 1974, died on November 30, 2010, at age 78.

A Bay Area native and long-time resident, Patricia was born in Oakland and grew up in Palo Alto. After graduating from Stanford in 1955, she received a master's degree in library science from Cal State Fullerton. She joined SRI in 1970, performing economic research in land use, recreation, and tourism in the Economics Division. She left SRI in 1974 and moved to Southern California, where she was a professor and Director of Library Medical Services at the Southern California College of Optometry.

After returning to the Bay Area, Patricia volunteered at Filoli, a National Trust Property for Historic Preservation in Woodside, and at the Menlo Park Family History Center. She is also remembered for her passion for genealogy and Stanford women's basketball.

Patricia is survived by Kenneth, her husband of 55 years; daughters Kimberley Ann and Penny Colleen; and grandchildren Ryan, Tricia, Megan, and Michaela.

James Dolen*

James Dolen, former manager of Contracts & Special Accounting Programs at SRI, died December 23, 2010, at age 83.

Born and raised in San Jose, Jim lived his entire life in the Santa Clara Valley, raised his family in Los Gatos, and spent the final 16 years at the Villages in San Jose. A graduate of Bellarmine Preparatory High School, he saw service in the Merchant Marine in the South Pacific at the end of World War II, as well as in the Army during the Korean War, stationed in Alaska.

After returning to the Santa Clara Valley, he graduated from San Jose State and began a successful business career as a contracts administrator at FMC, Lockheed, and SRI until his retirement.

In retirement, he was a valued docent for History San Jose, serving at the San Jose History Park and conducting walking tours of downtown San Jose. He and his wife, Margaret, also went on many cruises and family outings and were involved in activities at the Villages. An avid athlete and sports fan throughout his life, he supported local sports teams and was very happy when the Giants won the World Series in 2010.

Jim was married for 59 years to Margaret, who died in 2009. They raised six sons: Daniel, Gary, Richard, Jon, James, and Thomas. He is survived by grandchildren Avram, Allyson, Matthew, Erik, and Heron, and by two sisters, Joyce and Carol.

Victor John Forbes*

Victor John Forbes, an electrician and manager at SRI for nearly 30 years, died peacefully January 29, 2011, at age 85.

Known as John to all his friends, he was born in Cardiff, Wales, and served in the British Navy during World War II. In 1964, he immigrated to the United States and married his former neighbor in Wales, Anna Ivanoff. Both soon became United States citizens and purchased a home in Palo Alto.

When he first arrived in California, John sold Fuller Brush products door to door, charming housewives with his Welsh accent and enthusiasm. Reflecting his ambition, with only an eighth-grade education but trained as an electrician with experience as a foreman in both Great Britain and India, he was offered a position as electrician at SRI in 1965. Over time, he was promoted to head electrician, with responsibility for electrical construction services. He retired from SRI in 1994.

John was a very social person. He and Anna enjoyed their home life, entertaining friends and attending frequent social events, especially dances at the British American Club, where

they celebrated and reminisced with a community of British ex-pat friends. John was also an avid and award-winning darts player who often drove to pubs around Northern California for competitions. In retirement, he and Anna traveled across the United States, Great Britain, Europe, the former Soviet Union, and Mexico.

John is survived by Anna, stepson Peter Ivanoff, and grandchildren Sasha and Alexander.

Roy Glauz

Roy Glauz, an economist at SRI from 1960 to 1978, died peacefully on March 7, 2011, at age 87.

Born and raised in Detroit, Michigan, Roy graduated from the University of Michigan in 1944 with a BS in chemical engineering. After serving in the U.S. Navy, he earned an MBA at the Wharton School of the University of Pennsylvania. During his time with SRI, he was a Senior Industrial Economist in the Chemical Industry Economics Department. Roy's primary work focus at SRI was chemical market research.

Roy's eclectic interests included building things, gardening, ornamental horticulture, listening to classical music, and programming his home computer.

Roy is survived by Jane, his wife of 60 years; brother Robert; children Carolyn, Jim, Sally, and Becky; and grandchildren Annalise, Bethany, Sara, and Emily.

Robert Marth

Robert Marth, 73, a Senior Research Engineer at SRI from 1974 to 1981, died in Sunnyvale of cancer on December 21, 2010.

Born and raised in Tacoma, Washington, Robert received a degree in electrical engineering from the University of Washington in 1964, followed by a master's degree in electrical engineering from the Polytechnic Institute of Brooklyn, New York, in 1966, and a doctorate in 1972. He worked with Boeing Company in Washington, Bell Labs in New Jersey, SRI in Menlo Park, and ESL/TRW in Sunnyvale, from which he retired in 1995. While working at SRI, he proudly served in the Menlo Park Rotary Club as a member and avid fundraiser.

He is survived by his wife, Annemarie; sons Robert (Robbie) and Jeffrey; daughters GaeAnn, Julie, Teri, and Nichola; and 10 grandchildren.

Gordon Parker*

Gordon Parker, an SRI staff member from 1984 to 1991, died in Eugene, Oregon, of age-related causes on January 13, 2011, at age 90.

Born in Evanston, Illinois, Gordon held a bachelor's degree from Union College and a master's degree from Syracuse University. He served as a radar officer in the Air Force and worked as an executive with the Ford Foundation. As part of the international relations team at SRI, he traveled extensively in Japan, England, and Europe. At the time of his retirement in 1991, he was a Senior Consultant in Research Marketing and Administration. After his retirement, he enjoyed the study of trains, their schedules and history.

Gordon is survived by his wife, Elizabeth; a daughter, Cynthia Parker; two sons, James and David; four grandchildren and two great-grandchildren; and a brother, Robert.

Gordon Pryor

Gordon Pryor, an SRI Research Scientist for 32 years, died February 11, 2011, at age 77, after emergency quadruple bypass surgery.

Gordon was born in Los Angeles and lived his entire life in California. He graduated from Compton Union High in 1951, served in the Air Force for 4 years, and received a BA degree in 1959 from Long Beach State. In 1964, he received a Ph.D. in psychology from the University of California at Berkeley.

Gordon and his wife, Dolores, moved to Sunnyvale in 1964, when he began his career at SRI as an Experimental

Psychologist in the Bio Behavioral Science group. An early leader in neuroscience, he did basic research on the brain biochemistry of electroconvulsive shock as a treatment for severe mental depression. He then began a long career studying the preclinical pharmacology and toxicology of abused substances. In 1982, he received the SRI Fellowship Award for his outstanding accomplishments. He ended his career in 1996 as Special Assistant to the Vice President of the Life Sciences Division.

Gordon is survived by Dolores, his wife of 51 years; sons Mark and Gregory; daughter Christine; and grandchildren Austin, Connor, Taylor, and Carly.

Shirley Radding*

Shirley Radding, a Chemical Researcher at SRI for more than 40 years, died January 17, 2011, at age 88.

Shirley was born in Detroit, Michigan, and lived there until 1944. She graduated from Wayne State University in 1944 with a degree in chemistry. She worked at a pharmaceutical house in Detroit during World War II until her father was hired by the Navy and moved the family to San Francisco, where she joined the chemistry lab at Hunter's Point. After a brief time, she began her long career of chemical research at SRI. At the time of her retirement in 2001, Shirley was a Sr. Chemist in the Physical Electronics Lab in the Computing and Engineering Sciences Division. After retiring, she began her own consulting firm, doing literature searches and writing reviews on chemicals and other problems of interest in the medical field. Shirley was a longtime member of the American Chemical Society, which gives out an annual award in her name.

Shirley is survived by a sister, Thelma, as well as a brother, Herbert. She is also survived by many nieces and nephews, including Mike Radding and Joanne Hilliard, both from Southern California, and Laurel Radding and Lisa Harris from Northern California.

Stephen Stuntz

Stephen Stuntz, a Research Psychologist at SRI from 1964 to 1977, died at the Stanford University Hospital on January 15, 2011, at age 97.

Steve was born in St. Louis, Missouri, and raised in Findlay, Ohio. After graduating from Findlay High School in 1931, he attended Miami University in Oxford, Ohio, for 2 years. While in San Francisco in 1935, he enlisted in the U.S. Army. Because of his experience with amateur radio, he was assigned to duty as a signalman and stationed in the Philippines. After his Army service, he reenrolled in Miami University and completed his degree in speech in 1941. He earned a master's degree in psychology from New York University in 1947.

After serving as a research psychologist for several organizations, he and his wife, Elizabeth, moved to the Bay Area, and he joined the Sensory Sciences Research Center at SRI. At the time of his retirement in 1977, he was a Research Psychologist in the Urban and Social Systems Division (now the Policy Division).

Steve was a devoted ham radio operator and an active participant in the Palo Alto Amateur Radio Association (PAARA), which honored him with a life membership. His interests also included live theater and ballet, as well as photography.

Steve is survived by his daughter, Kay, and his brother, David.

Ronald Swidler*

Ronald Swidler, who worked in various chemistry-related positions at SRI for 32 years, died in Palo Alto on December 3, 2010, at age 80.

Ron was the first chemist to be hired at SRI's new Southern California Labs in 1956, and he helped build the South Pasadena labs. There he developed long-term client relationships that kept him busy for many years. After Ron transferred to Menlo Park in 1970, he managed the Organic Special Programs Department.

One outstanding success was Ron's invention and development of a new class of reactive dyes under a contract with Burlington Industries. The dyes were stable to light and laundering and were much easier to manufacture than other dye systems. For other clients, he developed and patented processes for making permanent-press fabrics, fire retardant coatings for fabrics, and new inks and toners for color printers.

In 1975, Ron joined a project sponsored by Savin Business Machines, which was the largest commercial project at SRI at that time. SRI was developing a completely new line of

office copiers for Savin, using a newly conceived liquid-toner approach. The project was set up in the Engineering Group, where experts in electronics, electrostatics, optical imaging, and mechanical design were available. Ron brought to the project a complete understanding of the chemical requirements for such an undertaking—the chemistry of the photoconductive drum, the toner development materials, and the entire exposure process. The Chairman of Savin, Mr. Paul Charlap, said that the results of SRI's work produced more than $100 million in new copier sales.

In his 32 years at SRI, Ron worked with three SRI business groups and with researchers in many disciplines. His numerous patents do not fully reflect the range of his creativity in fields such as fatty acid chemistry, dye and pigment chemistry, cellulose chemistry, textiles processing, boron chemistry, and electro-photography.

Donald "Smokey" Wallace

Donald "Smokey" Wallace, a computer pioneer and System Programmer at SRI in the early 1970s, died at home in Palo Alto of cancer on November 2, 2010, at age 73.

Smokey was born in Hollywood into a family of Scottish heritage, of which he was very proud, and he retained a love of everything Scottish and English all his life. He was memorialized with a pub crawl and bagpipe parade down University Avenue in Palo Alto on December 13, which would have been his 74th birthday. He acquired his nickname from his habit of wearing a Smokey the Bear hat.

Smokey graduated from California State University at Northridge with a degree in mathematics. At SRI, he worked for Doug Engelbart in the Augmentation Research Center (ARC), where he ran the lab's computer systems. Friends recall that when researchers began arguing over access to the limited capacity of the computers, he solved the problem by going home and refusing to return until management made a reasonable decision about allocating the computing resources.

In addition to his work at SRI, Smokey held a variety of senior management, research, and development positions at technology companies, including Adobe, Oracle, Digital Equipment, Xerox PARC, and IBM. He was a leader in the development of computer windowing technologies and participated in the early stages of setting up the Internet. He was recognized for his contributions as a member of the X Window System Community at Large with a USENIX Lifetime Achievement Award in 1999.

Smokey is survived by his partner of 18 years, Jan Merryweather; children Chad, Dana, Derek, Erica, and Hawley; seven grandchildren; and brothers Fred and Tim.

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*Member of the SRI Alumni Association

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