SRI Alumni Association

December 2013 Newsletter

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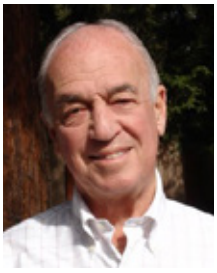
MESSAGE FROM CHAIRMAN TOM ANYOS



Tom Anyos

I fondly remember Joe McPherson, who, over the years, built and grew SRI's successful Innovation Search program. One of Joe's favorite sayings was, "Life is not a straight line equation." I now know (again) what he meant!

I've been a member of SRI's Alumni Association for well over 10 years. The association is a dedicated group of SRI alumni who work hard to maintain the memories of working at SRI and strive to keep alumni in touch with what's happening at SRI.

At the beginning of 2012, I assumed the role of chairperson, following the long and highly successful leadership of Boyd Fair. My plan was to follow in his footsteps and maintain a highly active and relevant association. Enter Joe McPherson… "Life is not a straight line equation"! Without any serious prior plans to move from our home in Atherton, a home we lived in for 43 years, my wife and I received a very attractive offer to sell. At the same time, we had been taking long weekend vacations in St. Helena and the Napa Valley. We had spotted a few homes there we thought we could comfortably live in.

So, within a month's time we sold our home, bought another one in Napa's Silverado Residential Homes district, packed, and moved. The commute from Napa to Menlo Park takes on the average about 2 or 2.5 hours. Heading back, depending on the time, may take 3 hours or more. This is not an everyday event.

After considering the requirements of the job, I sadly decided to step down as the chair of the association. I will remain involved in the Events Committee, a position that does not require monthly meeting attendance.

I continue to encourage readers of this newsletter and all alumni to join the association and get active in maintaining the culture and commitment we all made as members of the SRI staff.

I will be around, just not as often!

MESSAGE FROM FUTURE CHAIRMAN PETE VALENTI

Pete Valenti

Dear SRI Alumni Association Members,

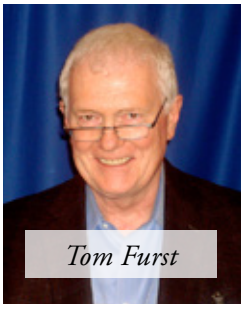
As we close another successful year for the SRI Alumni Association, I am very proud and encouraged to be able to continue to participate as a member of the Steering Committee. This next year, I have the honor of serving as the chairman of the committee and, under a new leadership structure, will share this position with Klaus Krause, vice chairman. We, along with the other members of the Steering Committee, look forward to leading our organization to another successful and interesting year in 2014.

Speaking for the Steering Committee, we wish you all a very happy holiday season.

SRI Alumni Association Annual Reunion in Menlo Park

On Friday, September 13, SRI alumni from the San Francisco Bay Area gathered in the International Building for their annual reunion. It began with genial conversation over drinks and delicious hors d'oeuvres and then turned to news about SRI, with presentations on the status of the institute and on the Arecibo Observatory, which SRI manages for the National Science Foundation. The attendees also honored two inductees into the Alumni Hall of Fame. As usual, the evening ended with the raffle of great door prizes and the popular chocolate fountain.

Status of the Institute


Tom Furst

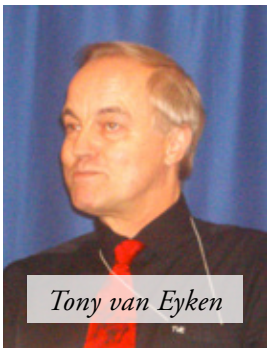
Tom Furst, Senior Vice President and Chief Financial Officer, began his update by looking back at the events that had been held in the International Building Conference Center over the last few months, marveling at their diversity and richness. The institute had hosted the SRI Fellows presentation honoring Phil Porras and Ian Colrain for their accomplished technical careers (see the August 2013 issue of the Alumni Association Newsletter) and the Staff Awards dinner for employees with 25-plus years of service, some of whom had been at SRI for 55 years. SRI had also opened the doors to the public with the Café Scientifique, which SRI has been hosting monthly since 2007, and a Churchill Club program on the future of human-computer interaction. The FBI of Northern California had met in the building—600 agents strong, pitches for new venture opportunities had been made to local venture capitalists, and an all-hands meeting had been held for the SRI staff. Tom said that no matter who was in attendance or what the subject was, the common element was that the room was energized. He noted that the alumni reunion had the same energy.

Tom remarked on the challenges of government contracting in 2013 because of the budget sequestration and continuing resolutions. He said that he is cautiously optimistic about prospects for 2014. SRI's technology continues to be important to the United States and the world. He cited the institute's innovations in cyber security, educational technology, robotics, and energy storage. Commercialization of SRI technology is producing three to four spin-offs a year, and royalties have been increasing.

SRI has submitted an application to the City of Menlo Park for a Master Plan and Development Agreement that would permit SRI to modernize the campus (see the April 2013 Newsletter). An Environmental Impact Report is being planned and should be complete in the first quarter of 2015. Tom said that SRI has built goodwill in the local community over the years and is looking forward to a smooth negotiation process.

On a personal note, Tom shared that he plans to step down from his position in several months. He will remain with SRI in a consulting capacity to help his replacement get oriented and to assist with the campus modernization project.

Presentation on the Arecibo Observatory: 50 Years of Significant Contributions; Even More To Come Under SRI Leadership


Tony van Eyken

At the reunion, Tony van Eyken, Deputy Director of SRI's Center for Geospace Studies in the Engineering Research & Development Division, described the types of research conducted at the Arecibo radio astronomy facility in Puerto Rico, gave some interesting facts about it, and showed breathtaking photographs.

Celebrating its 50th anniversary in 2013, the Arecibo Observatory was built by Cornell University and operated by it until 2011, when SRI won a competitive procurement resulting in a five-year cooperative agreement with the National Science Foundation (NSF) to manage, operate, and maintain the site. The Arecibo antenna is the largest single dish in the world, measuring 1,000 feet across. Originally built for ionospheric/atmospheric research, it is also used for radio astronomy and radar astronomy, covering such topics as space weather, changes in the ionosphere, pulsars, studies of the moon and near planets, and asteroid tracking. The observatory is also a significant educational center, hosting students from elementary schools through postgraduate work.

Astronomer Bill Gordon secured the original Department of

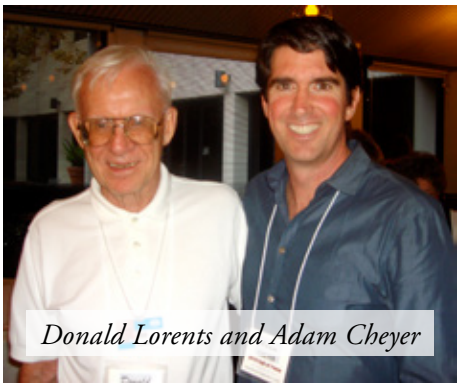
Defense funding ($9.7M) for the facility. He chose the location because nearly all the planets in the solar system are directly overhead. In addition, Puerto Rico has a topography characterized by sinkholes. At the observatory site, a cave roof most likely collapsed, creating a huge, nearly ideal spherical hole, minimizing construction costs for shaping of the dish.

Other facts Tony shared were that the Arecibo Observatory is a significant tourist destination, with more than 100,000 people passing through the visitor center each year. The movies *Contact* with Jodie Foster and *GoldenEye* (James Bond film) had scenes filmed at the observatory. In addition, the 1993 Nobel Prize in Physics was awarded to Russell Hulse and Joseph Taylor, who used the radio telescope for their discovery in 1974 of a binary pulsar that proved Einstein's theory of relativity.

Tony received an enthusiastic ovation for his tour of this remarkable facility.

Alumni Hall of Fame Induction

Two alumni were honored with induction into the SRI Alumni Hall of Fame, **Adam Cheyer** and **Donald Lorents**.



Donald Lorents and Adam Cheyer

When **Adam** came to the Artificial Intelligence Center (AIC) from UCLA in 1993, he began to conceive of ways to improve human interaction with computers and to unite the various components of artificial intelligence. The modes of human-computer interaction were increasing, with speech recognition, natural language understanding, the mouse, virtual reality, pen computing, text-to-speech, and higher-level applications such as e-mail, scheduling systems, and distributed databases. Adam brought organization to all these in a structure called Open Agent Architecture (OAA). Through an approach Adam branded "Delegated Computing," users could input a task request in a variety of ways, and then independent agents organized in a community would both collaborate and vie for selection to produce the best response. This environment produced more than 50 demonstration systems and planted the seed for a world-famous breakthrough in virtual personal assistants.

After leaving SRI in 1999 to try some of his ideas in the commercial world, he returned to the AIC in 2003 for its largest project ever, DARPA-sponsored CALO (Cognitive Assistant that Learns and Organizes). The objective of CALO was to create systems that could "learn in the wild," adapting to become ever more efficient at aiding users in accomplishing everyday tasks.

Four years later, Adam cofounded the SRI spin-off Siri, which launched the first "conversational assistant" iPhone app. Siri was acquired by Apple in 2010, and it now lives in iPhones and iPads everywhere.

Don joined the Molecular Physics Laboratory (MPL) in 1959, three years after it was founded by his graduate school colleague Charlie Cook, and he played a key role in its scientific achievements for the next 35 years. His training in interactions of low-energy electrons and ions with atoms and molecules fit well with the research of Charlie, Jim Peterson, and Felix Smith, and they soon built the lab into one with an international reputation. Don provided leadership during this period, including 10 years as director of the MPL. The lab grew to a peak of 60 staff members during his tenure.

Don's research encompassed extensive work in experimental and theoretical atomic and molecular physics, including electron-atom and ion-atom collisions. In 1972, he demonstrated a unique example of the practical benefits of basic research when he used his experience with scattering experiments on He2+ and Ar2+ to formulate the excitation mechanism for production of excited states in dense rare gases, which was the basis for the newly discovered rare-gas excimer lasers that were of importance in the Strategic Defense Initiative. This led to a laser development and application program that was a major part of MPL's activity for the next 10 years. Later, Don led a program to produce, characterize, and use carbon fullerene molecular clusters and their derivatives. This work carried on well into his partial retirement years.

Don was named an SRI Fellow in 1985 in recognition of his work in high-energy laser development. He and Charlie Cook were also founding members of SRI's Institooters band.

2013 ALUMNI ANNUAL REUNION (Continued)

Thank You to Everyone Who Made the Reunion a Memorable Occasion

Thank you to all who organized the reunion and contributed to making it such a success, including:

- Events chair and vice chair—Dave Harvey and Augustina Biosic
- Reception—Martha Agreda, Joyce Berry, Kay Clarke, Marlyn Johnson, Carolyn Terrill
- Floral arrangements and orchid centerpieces—Jane Cano
- Conference Services—Arturo Franco, Kerri Carder-McCoy, and staff
- Sandy Hinzmann of Staff Activities Center and the SRI Federal Credit Union for raffle prizes
- Photography—Don Berry
- SRI Corporate Security

2013 ALUMNI ANNUAL REUNION (Concluded)

Viki Young, SRI's 2013 Mimi Award Winner

SRI's Mimi Award is the highest recognition offered to staff members who have fostered the personal and professional growth of their coworkers. The award is given annually to an SRI staff member who has inspired others to realize their goals and vision.

In recognition of her embodiment of these attributes, Viki Young, a principal scientist in SRI's Center for Education Policy, was selected to receive the 2013 Mimi Award.

Several staff colleagues nominated Viki for the award, noting that she gives selflessly of her time and expertise to mentor others, does not shy away from giving honest feedback, and inspires her colleagues to continually grow professionally while taking a sincere interest in their lives outside work. Nominators also noted Viki's strong project leadership skills and ability to multitask while consistently producing high-quality work.

Perhaps one nominator said it best: "Our center is full of supportive staff, but Viki really does go above and beyond to make all of us stronger, more skilled individually as well as collectively."

The Mimi Award, established in 1994, is named in memory of Marian (Mimi) S. Stearns, who was vice president of SRI's Health and Social Policy Division. Annually, former Mimi winners review nominations from staff (not management) to select a winner.

New Director of Product Management for Innovation Programs

Pam Deziel has joined SRI as Director of Product Management for SRI's Innovation Programs. In this role, Pam will develop and deliver new products for sharing SRI's innovation best practices with government, academic, and commercial organizations around the world. Through these programs, SRI clients learn to foster and manage innovation and entrepreneurship within a supportive ecosystem.

Pam is a Silicon Valley native, with more than 25 years of product management experience in innovative high-tech companies ranging from start-ups to the Fortune 100. Her expertise is in product, business, and go-to-market strategy and execution, particularly in the software, mobile, and services industries.

Before joining SRI, Pam was vice president of software product management at Motorola Mobility, where she drove cadence, quality, and competitiveness for Motorola's Android products. Earlier, she was vice president of software product management at Palm, responsible for the first release of Palm's award-winning webOS platform, including operating system software, applications, cloud services, and developer ecosystem. She has worked with start-ups in wireless, enterprise, and healthcare segments, contributing expertise in product management, branding, and intellectual property management. She has also held senior product, partner, and corporate strategy positions with Adobe Systems, Apple, and Sun Microsystems.

Pam has a B.S. in applied earth sciences from Stanford University. She is on the board of the Stanford Rugby Foundation.

SRI Spin-off Grabit Is Commercializing Electroadhesion

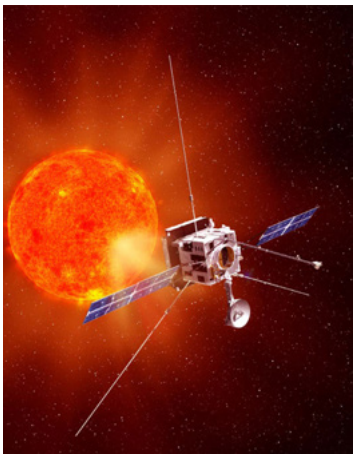
Grabit, Inc. manufactures electroadhesion-based material-handling products for the manufacturing, logistics, and service industries. Electroadhesion is an electrically controllable adhesion technology with ultra-low power consumption. Electroadhesion can be applied to a variety of materials with smooth, rough, or dusty surfaces and a wide variety of objects, shapes, and sizes. The technology was developed and patented in SRI's Robotics Program.

Grabit's products provide a technique of holding or grasping objects with minimal mechanical actuation and energy expenditure and include grippers and fixtures, case and box handling grippers, and smart conveyors for manufacturing, logistics, and service industries. Grabit currently has more than a dozen customers globally, including several Fortune 500 companies in such industries as warehouse automation, parcel handling, consumer products, and textiles. Its products are characterized by unprecedented flexibility and performance and low operating costs.

Grabit recently received Series A round funding from ABB Technology Ventures, NIKE Inc., and Formation 8, a technology venture capital firm with a presence in Silicon Valley, China, Korea, and Singapore. The funding will enable Grabit to commercialize electroadhesion for existing and new customers in multiple material-handling applications and to expand its global reach in the manufacturing and logistics market.

SRI and TowerJazz Deliver Imagers for Studying the Sun at Closer Distance

SRI, working with specialty foundry TowerJazz, has delivered the first complementary metal-oxide semiconductor (CMOS) imager engineering units to the Naval Research Laboratory for use on the Solar Orbiter Heliospheric Imager (SoloHI) optical telescope.



Artist's conception of the Solar Orbiter spacecraft (Illustration: NASA)

SoloHI is part of the NASA and European Space Agency Solar Orbiter mission. Planned for launch from Cape Canaveral Air Force Station in 2017, the spacecraft is expected to study the sun from a closer distance than any previous mission. It is designed to understand how and why the sun varies, how planetary systems respond, and the effect on human activities in space and on Earth.

The Solar Orbiter mission will be the first time that such a large-format CMOS detector has flown. With its large field of view, SoloHI will make high-resolution images of the sun's corona and solar wind and be able to connect remote-sensing observations of the corona to the plasma being measured at the spacecraft. SoloHI's measurements will enable scientists to identify space weather events such as coronal mass ejections, which can disrupt electromagnetic fields on Earth, affecting power lines, satellite communications, and cell phone service.

The SoloHI imager is a CMOS image sensor built using customized 0.18-µm CMOS technology. The 2K x 2K (4-megapixel) CMOS imagers were radio hardened through TowerJazz's manufacturing process. The full-flight SoloHI focal plane will incorporate a mosaic of four imagers providing a 4K x 4K (16-megapixel) format. This first delivery of the SoloHI high-performance CMOS imager technology is an important step toward deploying it in a wide range of aerospace applications.

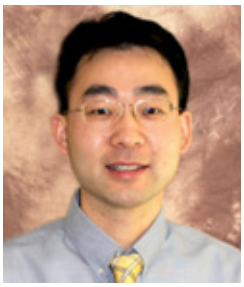
SRI Biosciences Expands Research, Space, and Staff in Shenandoah Valley

SRI has completed the final stage of expansion of its 40,000-square-foot research and development facility in Virginia. The $2.8 million build-out advances bioscience research capabilities at SRI's Shenandoah Valley Center for Advanced Drug Research. SRI has also renewed its five-year lease in the Innovation Village at Rockingham, reaffirming its commitment to the region.

The biomedical facility expansion includes more than 2,500 square feet of laboratory and storage areas for preclinical research, drug discovery, and drug development programs to support growing client and partner needs. R&D at SRI Shenandoah Valley focuses on basic research, including emerging infectious diseases, metabolic diseases, and proteomics; therapeutic discovery and development of drugs, vaccines, and biologics; and personalized medicine, such as companion diagnostics and biomarkers.

As part of SRI's growth, three renowned experts have joined the SRI Shenandoah Valley team: Thomas Voss, Ph.D., Director of Virology, Center for Immunology and Infectious Diseases; Tianyi "Tony" Wang, Ph.D., Senior Scientist, Virology, Center for Immunology and Infectious Diseases; and Lynn Chellarajan, Laboratory Supervisor.

Dr. Voss's research interests include cell-virus interactions and their role in acute viral infections, as well as therapeutic drug and vaccine development. At SRI, he is continuing his research on new models for developing treatments for influenza and other infectious diseases. He joined SRI from the faculty of the Tulane School of Medicine's Department of Microbiology and Immunology. Earlier, he worked in various roles at Southern Research Institute, ultimately as vice president of the Homeland Security and Emerging Infectious Disease Division.



Dr. Wang studies the entry mechanism of hepatitis C virus (HCV) and natural immunity against viruses. His current research includes characterizing the role of the occludin protein in HCV entry and how HCV infection alters the physiology of tight junctions, the areas between cells where membranes join together. Before coming to SRI, Dr. Wang was a faculty member in the University of Pittsburgh Department of Infectious Diseases and Microbiology.

Lynn Chellarajan is the operational manager of the new SRI Shenandoah Valley preclinical laboratories and oversees the daily operation of a broad range of toxicology and pharmacology studies conducted to advance promising therapeutics from the discovery stage toward human clinical trials. Before joining SRI, she spent more than a decade in the pharmaceutical industry at PharmaMar USA, Millennium, and Eisai. She is actively recruiting additional staff to support SRI's expanding preclinical activities.

SRI's successful growth in Shenandoah Valley has also been demonstrated through regional innovation programs and spin-off companies that have resulted from SRI research and development. Regional and local start-ups include Redcoat Solutions, Inc., and RioGin. Redcoat will soon launch bed bug detection products into commercial and consumer markets. The products will enable users to quickly determine when a room is infested with bed bugs before obvious signs of infestation are visible. RioGin is researching a technology to reduce side effects and improve the efficacy of peptide drugs.

SRI Shenandoah Valley is on 25 acres in the Innovation Village at Rockingham, a 325-acre development less than two hours from Washington, D.C., and other mid-Atlantic cities.

SRI Awarded Contract from National Institute on Drug Abuse To Test Safety of Medications for Treatment of Substance Abuse

SRI has been awarded a five-year contract valued at up to $9.75 million from the National Institute on Drug Abuse (NIDA) to conduct preclinical safety studies of potential new medications to treat substance abuse. SRI researchers will study potential drug-drug interactions between new treatment therapies and common drugs of abuse to assess potential adverse reactions.

According to the Substance Abuse and Mental Health Services Administration (an agency within the U.S. Department of Health and Human Services), an estimated 22.5 million Americans age 12 or older—or 8.7 percent of the population—had used an illicit drug or abused a psychotherapeutic medication (such as a pain reliever, stimulant, or tranquilizer) in the past month at the time of a survey in 2011. When a novel drug is under development, it is important to know early whether it might, if taken with a drug of abuse (e.g., cocaine, morphine), cause side effects from overdosing, such as seizures.

Under this contract, NIDA will first identify compounds that may be potential therapeutics. Then, SRI researchers will work with NIDA to design and execute preclinical studies to assess the safety of those compounds, both individually and in combination with known drugs of abuse. SRI will test compounds at various stages of development with the goal of advancing promising discoveries into clinical trials.

Combining Engaging Media with Interactive Technology and Teacher Training Improves Early Learning

A study by Education Development Center, Inc. (EDC) and SRI found a significant increase in the acquisition of essential early math skills, such as counting, recognizing numerals, recognizing shapes, and patterning, among four- and five-year-old children from economically disadvantaged communities who participated in a 10-week PBS KIDS Transmedia Math Supplement. Transmedia includes the use of familiar characters, settings, and stories in different media formats. The materials featured videos and interactive content from several PBS KIDS properties, such as *Sid the Science Kid, The Cat in the Hat Knows a Lot About That!, Curious George*, and *Dinosaur Train*, as well as nondigital activities including books and foam shapes, designed to support the growth of math understanding.

The PBS KIDS math supplement incorporated videos, digital games, interactive whiteboards, laptop computers, teacher support, and hands-on math materials. The EDC and SRI researchers found that children who used the supplement improved significantly in their understanding

of the targeted early mathematics skills compared with the control group. Children who used the same technology without the integrated math materials did not experience the same learning gains relative to the control.

Teachers who used the math supplement reported significant changes in their confidence and comfort with early mathematics concepts and teaching with technology. Although early math achievement has been widely recognized as a strong predictor of later school achievement, many preschool teachers have received limited training in supporting student learning of mathematics. This study showed positive effects of giving teachers resources that support them in orchestrating children's learning with media.

The study demonstrated that children living in traditionally underresourced communities were able to build foundational math skills when given engaging digital content, opportunities to practice both on and away from screens, and knowledgeable adults.

The Cat in the Hat Knows a Lot About That! *was one of several PBS KIDS videos and games used in the study.*

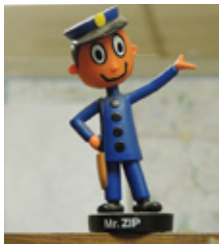
HISTORY CORNER

The Automatic Machine Reading of Zip Codes

Excerpt from *A Heritage of Innovation: SRI's First Half Century* by Donald L. Nielson, 2004, SRI International, Menlo Park, CA. Reprinted by permission.

The zip code was clearly an attempt on the part of the USPS to speed the sorting and handling of all types of mail. But unless that code was amenable to repeated automatic machine reading along its journey, its impact would be modest. In the early 1970s, the Postal Service (the Post Office until 1971) issued a request for proposals for a high-speed, non-contact method to imprint on letters some form of machine-readable address. Since the zip code was normally written on the envelope by hand or machine, that first machine reading of such varied text was anything but reliable, particularly after it suffered the vagaries of mail handling. The USPS sought a way to read a zip code once, then encode the destination address in binary form and print it onto each letter. At SRI Fred Kamphoefner's Engineering Sciences Laboratory had been working on nonimpact printing methods since the mid-1960s, so it submitted a bid for this work and won the contract.

SRI's ink jet technology had been used to imprint machine-readable bar codes on a variety of objects, including the backs of checks and credit card sales slips. Once the readable code was imprinted, it enabled the rapid automatic sorting of such transactions and, for both checks and credit slips, became widely used. In each case, it was necessary at the first handling to lift the relevant information from the check or sales slip, either by hand or by OCR. For the USPS, this meant reading the zip code. Within a short time and using its ink jet printing technology, SRI delivered an experimental system that was successfully demonstrated at the USPS engineering facility in Washington D.C. The Postal Service, convinced of the utility of this approach to automatic handling, awarded a contract to A.B. Dick to build and install printers across the postal system. As it turned out, A.B. Dick had been developing a production version of the same SRI ink jet technique, which it had asked SRI to review in mid-1972. Although it would then not be involved with USPS hardware for some time, SRI continued to develop inks for such printers for both the Postal Service and A.B. Dick. The ink jet-barcode process is still in use on mail today.



Taxi Tales

In the December 2011 Alumni Newsletter, we introduced Taxi Tales*, wonderful reminiscences by Peter Weisshuhn about taxi drivers and adventures during his travels with SRI. Peter was in SRI's Croydon office and worked mostly for European clients, as well as for U.S. and Japanese clients in Europe. In this issue, we accompany Peter and his capable guide on a tour of 1990s Soweto.*

Johannesburg

By Peter Weisshuhn

In the early 1990s, I took several business trips to Jo'burg, where I stayed at the Holiday Inn in Sandton, an attractive suburb far from the dangerous centre of town. Staying over one weekend, I asked at the front desk what sightseeing trips were available. After some discussion, I chose an excursion into Soweto, the black township outside Jo'burg that supplies the city and surrounding areas with cheap labour and a fair or, more likely, unfair share of criminals.

There are so many illegal immigrants in Soweto that its population is unknown, but it is suspected to be larger than Jo'burg's, perhaps 2 million to 3 million. The apartheid government had founded Soweto decades ago with simple but sturdy brick bungalows to house blacks well away from the city. But the government eventually lost control over the township's administration. Rents were no longer paid, and the government had wisely kept Soweto's power station and waterworks running, even though nobody paid for electricity or water. But shutting it down might have started a civil war. Soweto was not a place where outsiders could venture with impunity.

What persuaded me was the assurance that the excursion was led by a man who lived in Soweto, had taken many of the hotel's guests there in his minibus, and had always brought them back unharmed. Our guide, the aptly named Daniel, arrived on time in his fairly new and clean Volkswagen bus, looking efficient and trustworthy. He also proved to be a bit of an entertainer and enjoyed telling us about his numerous exploits in dealing with scoundrels intent on depriving him of his vehicle or his life. Once, when stopped by a man aiming a pistol at his windscreen and ordering him out of the car, Daniel had stepped on the accelerator and run the evil one down. Daniel was reticent about the details. But he had carried a pistol since then, and we were to understand that we were in safe hands. And so it proved.

Soweto is vast and contains a surprising variety of living quarters, from its millionaires' row to houses that would not disgrace an English suburb to shacks constructed from corrugated iron "borrowed" from the roof of the local bus depot. Daniel took us into a shebeen, a dilapidated drinking den where happy, glazed revelers already well lubricated by midmorning invited us to join them. Later he pointed out archbishop Tutu's mansion, the neat and modest house of Nelson Mandela, who had recently been released from prison but did not live there, and the ugly fortress-like villa Winnie Mandela had built, which her husband on his release refused to enter.

We lunched in a restaurant that was simple but perfectly acceptable and served tasty food. Wherever Daniel stopped on what was presumably the route he took every time, children and adults would wave to him; he was obviously well known and liked. When some boys kicked around a ball in a dusty square, we joined briefly in their game, to their utter delight.

To round off our experience, Daniel took us to visit a friend who, with his wife and two lovely boys, inhabited a one-room shack. The beaming owner showed us with pride the family bed with an ornate quilt, the ancient radio, the two-ring hot plate and tiny fridge, which constituted their kitchen. Running water and sanitary facilities were shared with several neighbours, and the shack had been constructed in a day with friends using "borrowed" materials. It was all they needed to live and bring up two boys. If they were dissatisfied with their condition, they did not show it. I expect they derived a considerable part of such income as there was from Daniel.

Among the many surprises Soweto held for us was the natural friendliness of the people we met, most of whom would have had no financial incentive to smile at us. We also noticed the complete absence of begging, something we would appreciate in European cities. None of us had felt uneasy or in danger at any point. It was an excursion very much worth taking, and Daniel was well rewarded for leading us into the lion's den and safely out again.

Jake Feinler Honored with Internet Society's Jonathan B. Postel Service Award

In recognition of her significant contributions to the early development and administration of the Internet, the Internet Society presented Jake Feinler with its prestigious Jonathan B. Postel Service Award during the 87th meeting of the Internet Engineering Task Force in Berlin, Germany, on July 31. Jake was commended for her leadership of the Network Information Center (NIC) for the ARPANET and Defense Data Network.

From 1974 to 1989, Jake ran the NIC at SRI under contract to the Department of Defense. The NIC oversaw the use of Internet addresses and developed the first Internet "yellow-" and "white-page" servers, as well as the first query-based network host name and address (WHOIS) server. Jake's group managed the Host Naming Registry and developed the top-level domain-naming scheme of .com, .edu, .gov, .mil, .org, and .net, which is still in use today. (See Jake's article on SRI's role in developing the registry in the April 2011 Newsletter.)

In the press release announcing the award, Lynn St. Amour, President and Chief Executive Officer of the Internet Society, was quoted as saying, "Jake is a true Internet pioneer and one of a small group of researchers and scientists who helped shape the early direction of the Internet. … Jake collaborated often with Jon Postel on many critical programs and this award is a testament to her selfless devotion, exceptional leadership, and technical contributions to the global data communications community."

Jon Postel, founder of the Internet Society, was a pioneer in the Internet. Many believe his greatest contribution was his role in creating the Internet Assigned Numbers Authority, which provided the numbering and protocol management systems needed for the Internet to grow. The Internet Society established the Postel Award to honor individuals or organizations that, like him, have made outstanding contributions in service to the data communications community. The award is focused on sustained and substantial technical contributions, service to the community, and leadership.

Bay Area Alumni: Choose the Spring Fling Locale

The Bay Area has so many choices for a Spring Fling outing that the Alumni Steering Committee is seeking your opinion on where to go.

We are considering the following locations for the 2014 Spring Fling:

- Chabot Space & Science Center, Oakland
- Federal Reserve Bank, San Francisco
- Intel Museum, Santa Clara
- TCHO Chocolate Factory Private Tour, San Francisco
- Alameda Naval Air Museum.

Please let the Steering Committee know which would be of most interest to you. Please send an email stating your preference to steering-committee-alumni@sri.com.

The SRI Alumni Association welcomes new members:

Judy Colwell
Gontran de Quillacq
John Ginn
Glenn Gottlieb
Walter Kyle
Jim McDonald
Shannon Seaberg

And welcomes back previous members:

Adam Cheyer
Lee Garrison
Brock Hinzmann
Earle Jones
Eugene Moore
Sarita Skidmore
Roger Williams

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

ALUMNI NEWS (Concluded)

2014 Membership Directory

The enclosed directory contains new members and corrections as of December 6, 2013. This is the only directory you will receive for 2014; directory addendums will no longer be published. Please continue to keep us up-to-date with any address or email changes you may have by sending an email to steering-committee-alumni@sri.com.

CREDIT UNION NEWS

IN MEMORIAM

A. William "Bill" Bloom*

Bill Bloom, a former senior executive at SRI, died in Palo Alto on October 7, 2013, from complications of a stroke. He was 90 years old.

Born and raised in Providence, Rhode Island, Bill graduated from high school at age 16 and received a degree in chemical engineering from the University of Rhode Island three years later. After serving in the U.S. Navy during World War II and then starting his engineering career, Bill earned a master's degree from Stevens Institute of Technology in 1952 and an MBA from Harvard Business School in 1954. After 15 years with RCA in Chicago, Bill moved his family to California to work for Hewlett-Packard, where he stayed for 10 years. After three years of travel and consulting, he joined SRI in 1973. Focusing on business consulting, Bill demonstrated his strong intellectual and practical skills in concentrating on the key issues involved in taking technology from invention to finished product. He retired from SRI in 1990 as Senior Director in the Information Industries Division of the International Business Consulting Group.

As a long-time resident of Palo Alto, Bill was very involved in civic activities, including service as a member of the Palo Alto Planning Commission and membership on the boards of more than 10 civic organizations. He and his wife, Jane, also traveled extensively, visiting all seven continents.

Bill is survived by Jane, sons David and Richard, grandson Trevor, and granddaughter Christina, as well as two stepchildren and two stepgrandchildren.

J. Morse Cavender*

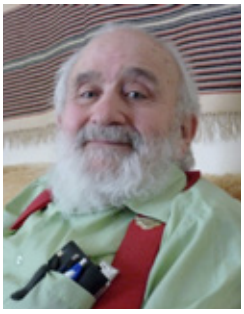
Morse Cavender, a former industrial economist and management consultant at SRI, died on November 26, 2013, at age 88.

Morse grew up in Wilmington, Delaware, and moved to Colorado with his parents in the 1940s. After serving in the U.S. Navy Air Corps in the Pacific during World War II, he received bachelor's and master's degrees in chemical engineering from the University of Colorado.

After working in engineering and management roles at Procter & Gamble, Morse joined SRI in 1954. His first assignment was a classified project for the U.S. Air Force, which included meeting with the heads of most of the major U.S. chemical companies ("heady stuff," as he described it). Later, he helped establish the Long Range Planning Service, which came to provide guidance and information on planning methods and business opportunities to as many as 300 client companies. He also directed a Corporate Strategy program set up to assist individual companies in planning growth and development.

Morse left SRI in 1973 to form his own consulting firm, specializing in management consulting for overseas companies. Before his retirement in the early 1990s, the work took him to countries in every major continent; as a result, he said, "Now I have friends in many places, and a bit of understanding of what the world is all about." He never severed his ties to SRI after he left the institute, and he remained a member of the SRI Alumni Association until his death.

Paul S. DeCarli*



Paul DeCarli, shock wave physicist in the Poulter Laboratory since 1954, died on August 4, 2013, following surgery for stomach cancer. He was 83 years old.

Paul grew up on a dairy farm near Stockton, California, and began studies at Stanford in 1948. After serving in the U.S. Army from 1952 to 1954, he joined SRI. He also returned to Stanford and received a B.Sc. in materials science in 1956.

During a long and distinguished career at SRI, Paul worked on studies of shock effects of explosions and high-speed impacts on metallic and geologic materials. He was the first to synthesize diamonds from graphite, a shock-wave process for which he held the patent. For much of his career at SRI, he worked on government contracts involving large-scale shock experiments and properties of materials. He and his colleagues were the first to demonstrate the shock origin of melt veins in meteorites and the entrapment of noble

gases in shocked meteorites. He was an internationally recognized authority on meteorites and meteorite craters, and he focused on this area and on planetary science after he "retired" in 1995.

After "retirement," Paul continued to publish state-of-the-art research results in technical journals and present at technical symposia until shortly before his death. He continued to come to the SRI campus almost every day, providing research ideas, consulting on projects, and performing shock-wave computations. He also tutored students at Menlo-Atherton High School and served as Ph.D. thesis advisor for several students in the United States and abroad.

Paul was very active in the community, participating in community events and playing the bassoon in the South Bay Community Orchestra. He and his wife, Anne, who plays the oboe, played woodwind chamber music with friends in their home weekly for most of the 53 years of their marriage.

Paul is survived by Anne; son John and daughter Elizabeth; sisters Madeleine and Elisabeth; brothers Peter and Ralph; and many cousins, nephews and nieces, and grandnephews and grandnieces.

Lee Robert DeLapp

Bob DeLapp, a former SRI staff member, died in San Jose on September 24, 2013, at age 94.

Starting at SRI in 1962, Bob worked in and then ran the Instruments Calibration and Repair department. He retired as an Instrumentation Specialist in 1996.

Bob is survived by Dorothy, his wife of 72 years, and by three sons, four grandchildren, and five great-grandchildren.

Lorenzo "Larry" Franceschini*

Larry Franceschini, a former SRI staff member located in Italy, died of Parkinson's disease on September 4, 2013, at age 92.

In 1954, Larry became the first Fellow in Economics/Management Sciences under SRI's International Fellows program. Larry had met Hoot Gibson when he was working on a project for the Italian machinery maker Franco Tosi. After his one-year stay in Menlo Park, SRI retained Larry to represent the institute in Milan. After a few years, he was made Director of SRI's Italian office in Milan, although he was still not an SRI employee. Larry's wife, Claudia, was a half-time secretary in the Milan office from 1962 to 1977, but Larry did not become an official employee until 1976. He retired in 1982.

Larry is survived by Claudia and their two sons, Alberto and Emanuele.

Lawrence Shigeto Fukumoto*

Larry Fukumoto, a long-time SRI staff member, died on September 13, 2013, from the effects of a stroke. He was 86 years old.

Born and raised on the island of Maui, Larry came to the Bay Area in 1954. He began his career at SRI in 1956 and retired as Mail Service Supervisor in 1992. Of his time at SRI, he said, "SRI was a wonderful place to have worked." Reflecting SRI staff members' high regard for Larry, he has been nominated for induction into the SRI Alumni Hall of Fame for 2014.

Larry enjoyed a strong retirement until his last year; he loved traveling, John Wayne movies, and especially social lunches with friends. Near the end of his life, his ex-wife, Margaret, took him back home to care for him; they had always remained friends.

Larry is survived by Margaret; their adopted daughter, Debra; and grandchildren Luke, Lance, and Makena.

Jean Ware Nelson

Jean Nelson, a former SRI staff member, died in Boise, Idaho, on April 9, 2013, at age 94.

Born and raised in Coeur d'Alene, Idaho, Jean was introduced to foreign travel when she was able to attend school in Europe in sixth grade and as a junior in high school. She graduated from Vassar College in 1939 and went to work for her father's insurance company. In 1944, she joined the Department of State's Foreign Service, serving as a cryptographer in Turkey, Romania, and Czechoslovakia. After the war, she attended Stanford, where she received a Ph.D. in history. She joined SRI's Naval Warfare Research Center in 1957 as a historian and specialist on Eastern Europe. When that center's needs changed, she moved to SRI's Long Range Planning Service (LRPS) as program manager on the effects of social changes on business. She became the first woman to present a paper at SRI's annual LRPS Client Conference and was voted best speaker of that meeting. Two years later, she became the Research Director of LRPS (later the Business Intelligence Program, or BIC). Not only was Jean responsible for research programming and quality control, she cajoled many SRI technical experts into writing business-oriented reports and mentored many younger staff members in the rigors of SRI research and report-writing standards. She retired from SRI as BIC's Director of Research in 2004.

Leonard Eugene Orsak

Leonard Orsak, a former SRI staff member, died on October 23, 2013, at age 78.

Born and raised in New Mexico, Leonard received a bachelor's degree in electrical engineering from New Mexico State University. He then moved to California to attend Stanford University, where he received a master's degree in electrical engineering. He began his engineering career in 1957 at SRI, where he worked as a Research Engineer in the Communications Laboratory. He left SRI in 1966. At SRI and in subsequent engineering positions, he designed electronics for satellites, seismological equipment, mainframe computers, and wind power systems.

Leonard is survived by children Michael, Kara, and Amy; grandchildren Nicole, Megan, Lucas, Benjamin, Byron, and Lucy; and sister Anna.

Kenneth M. Sancier*

Ken Sancier, a former materials scientist at SRI, died on August 8, 2013, at age 93.

Ken earned a Ph.D. in chemistry in 1949 from Johns Hopkins University while working at Linde Air Products Company as a gas chemist. He had a distinguished early career as a lecturer and researcher in chemistry at the University of Tokyo, Brookhaven National Laboratory, and Johns Hopkins. In 1973, he joined SRI as one of the original and key researchers of the Materials Research Laboratory. In a career spanning 33 years, Ken did research in such diverse areas as magnetic properties of materials, solar energy conversion, electron spin resonance spectroscopy, and semiconductor surface reactions. His outstanding scientific research in the field of materials science and physical chemistry resulted in more than 70 technical publications and 10 patents. In addition to this field, Ken did some pioneering work on biomedical applications.

Starting in the 1980s, Ken became interested in the challenge of explaining the scientific basis for the Chinese practice of Qigong. He started experimenting and developing new ways to measure forces, pressures, and other parameters during standard examinations as a way to try to understand the mechanisms involved in ancestral medicine and, more specifically, in Qigong. He published 27 papers as a result of his interest and experiments in Qigong and developed the original Qigong Database™ to collect this vast amount of scientific information. Ken also founded the Qigong Institute and organized lectures on medical Qigong given by Qigong masters and professionals. At the University of California, San Francisco, he organized more than 70 lectures on Qigong for the public.

Kenneth Shoulders

Ken Shoulders, a former SRI staff member, died from a subarachnoid hemorrhage on June 7, 2013, at age 86.

Ken worked at SRI for 10 years, beginning in 1958. He was internationally recognized as the "father of vacuum microelectronics." While at SRI, he designed and built the first quadrupole mass spectrometers and received several patents for electronic technologies. At the time of his departure, he was a Staff Scientist in the Applied Physics Department of the Engineering Sciences and Industrial Development Group.

Ken is survived by his wife, Claire, daughters Diane and Lee, son Steven, and granddaughters Madeline and Hannah.

Karen Steinmetz

Karen Steinmetz, a life sciences researcher at SRI, died after a year-long battle with uterine cancer on August 19, 2013, at age 55.

Born in Staten Island, New York, Karen grew up in Stockton, California, where she graduated from Lincoln High School and received a bachelor's degree in psychology from UC Davis in 1980. After briefly working at Syntex, she joined SRI's Life Sciences Division in 1982 as a biological technician. She quickly rose through the organization, becoming the first non-Ph.D. in the division's history to be promoted into the scientist category. During her first tenure at SRI, she developed and published on new assays for measurement of genotoxicity in pancreatic cells, cell proliferation assays as an indicator of carcinogenesis, human hepatocyte assays, and seminal papers on the mechanisms of carcinogenicity of methapyrilene and paradichlorobenzene. While working at SRI full-time, she obtained her M.A. in toxicology from San Jose State University in 1986.

In 1991, Karen left SRI to enter a doctoral program at Indiana University, where she received her Ph.D. in 1996. After completing a postdoctoral fellowship at the University of Wisconsin, Karen returned to the Bay Area, where she worked at several biotechnology and pharmaceutical companies before returning to SRI. After she rejoined SRI as Director of Mammalian Toxicology in 2003, she won several important new contracts and became widely known and respected in a broad range of fields, including cancer models, Alzheimer's disease, neurotoxicity testing, and juvenile animal models. Overall, Karen spent more than 30 years in the fields of early drug discovery, safety, and preclinical development in a wide variety of pharmaceutical products. The announcement of her death prompted numerous accolades from colleagues and clients, with comments on how Karen was the most vibrant, high-energy scientist they had ever met. A few described her as "a force of nature."

Karen was an avid outdoors enthusiast, as well as an accomplished pianist and artist. As a devoted supporter of public television, she often organized SRI groups to participate in the phone banks during PBS station KQED's pledge drives.

Karen is survived by her husband, Peter, and stepchildren Alexander and Cassandra; and by her mother, Carolyn; sister Kristin; brother Erik; and nephew Andrew.

*Member of the SRI Alumni Association

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