

## DECEMBER 2007 NEWSLETTER



### MESSAGE FROM PRESIDENT BOYD FAIR



*Boyd Fair*

This issue of the Newsletter marks the end of another year of Alumni Association activities. The year concluded with the largest annual reunion in my tenure as your Chairperson. Unforeseen events prevented Curt Carlson from joining us this year; however, we were able to “grab” Tom Furst out of the hallway and he gave us an impromptu summary of new SRI offices and the Institute’s financial health, which continues to be strong again this year. Then we heard Barbara Heydorn tell us about her new Center of Excellence in Energy and its mission at SRI. Pictures of many in attendance will be seen on the following pages.

This year was also the 30<sup>th</sup> anniversary of the very first three-network interconnection experiment involving the original Arpanet, Darpa’s Packet Radio network (at SRI) and a satellite network between the US and UK. This work led directly to the “big” Internet that we have come to know so well. Many SRI alumni were in attendance for the celebration at the Computer History Museum where about 400 people from around the world gathered. Don Nielson was one of the speakers on the VIP panel. Those of you who were part of this exciting era of research at SRI will find the article on this event of particular interest.

You can also read about several other alumni and what they are doing now. We have also added a Letters to the Editor section where readers’ comments can be shared with other alumni members. We encourage you to submit comments, items of interest, and/or

suggestions of other items you would like considered or commented on in the next Newsletter.

You will also find other articles about SRI alumni and their reminiscences of SRI. And as always, we include the names of recent SRI retirees, alumni moves, and a list of new members of the Alumni Association.

The Steering Committee is in need of some “new blood” and fresh ideas to keep the association strong and healthy. Many of the members have served tirelessly on your behalf for many years and would like to see others get involved in the activities of the Alumni Association. I personally invite any of you who are willing to help, to join us at one of our upcoming Steering Committee meetings. They are normally held on the third Thursday of the month from 10am to noon in the main SRI building. Please drop me, or any committee member, a note to confirm the time of the next meeting and to allow one of us to meet you in the lobby to facilitate your entrance into the building. We look forward to seeing you.

Finally, I want to recognize and personally thank each and every Steering Committee member who have worked with me (and those who worked with them on various committee activities) for all their hard work again this year. Without the efforts of Bob, Don, Fred, Joyce, Marlyn, Murray, Pete, Phil, Russ, and Tom, the Newsletter, Spring Fling, and Reunion would not be possible and the association would wither and fail.

Merry Christmas to all and I hope you have a happy and healthy New Year. --- Boyd

# ALUMNI ANNUAL REUNION

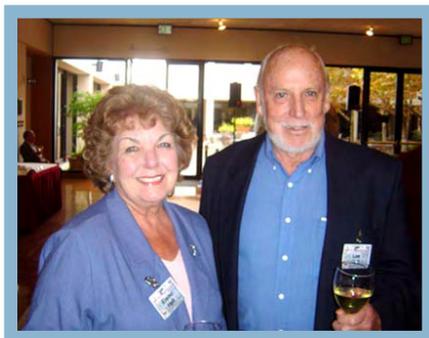
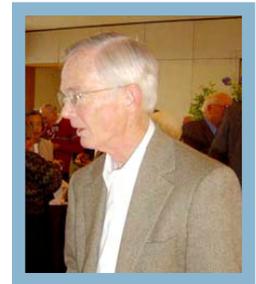
120 alumni members and guests attended the 2007 Reunion on October 11 held in the SRI International Building. Members and guests were welcomed by: Joyce Berry, Jane Cano, Sandy Needs, and Marlyn Johnson.



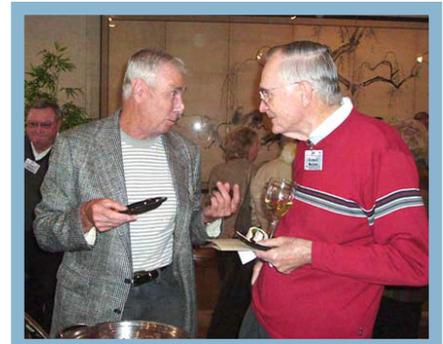
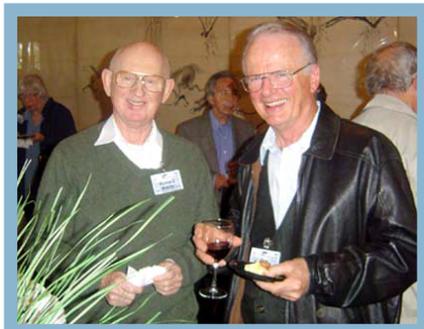
Welcome to new Alumni members Karen Baxter (left), Judy Foster, Jim Gaddie, and Tom Humphrey (right) who took advantage of our special offer and joined the association at the reunion and were rewarded with free admission.



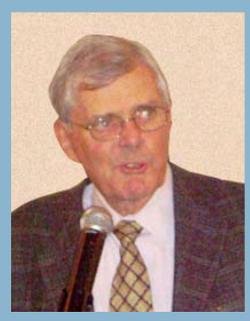
Thanks again to the Institooters for providing that wonderful "Big Band" sound that so many of us enjoyed.



There was a great selection of food and drinks for all. Thanks to Arturo Franco and the entire staff of Conference Services for providing the menu and their excellent support in planning and serving at the reunion.



## ALUMNI ANNUAL REUNION (Concluded)



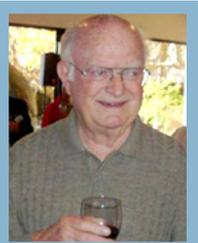
Steering Committee Chairman Boyd Fair welcomed members and guests and thanked Events Chairman Tom Anyos for another fine event.



The featured speaker was Barbara Heydorn, the new Director of the Center of Excellence in Energy. She described some of the latest energy projects in the labs and her group's focus on linking R&D capabilities from throughout SRI to business opportunities for our clients.



Tom Furth spoke in Curt Carlson's place and told alumni of the State of the Institute.



Sandy Hinzmann of SAC, and her husband, Brock, were our guests at the reunion.

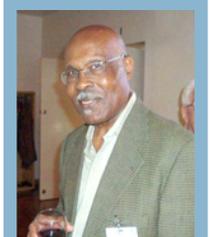
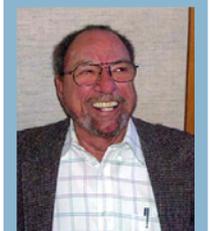
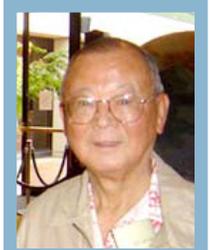


### Door Prizes!

Tom Anyos drew the winning numbers and awarded prizes presented by SAC and the Credit Union.



Reunion Photos by:  
Don Berry and  
Bob Schwaar



Don Nielson's still selling his book about the first 50 years of SRI, now in its second printing.



The SRI Credit Union supported the reunion and contributed cash for door prizes and passed out leather-like 2008 pocket diaries.

We finished with a yummy strawberry cream cake!



## HISTORY CORNER

### 30th Anniversary of Key Internet Precursor Celebrated

#### Bread Truck Helped Drive Evolution of the Web

On November 7, 2007, the Computer History Museum and the Web History Center sponsored a program to celebrate the 30<sup>th</sup> anniversary of the historic demonstration that spawned the Internet we know and use today.

Parked near the entrance of the Computer History Museum in Mountain View, a nondescript, gray van with the letters “SRI” painted on the side was feted at a celebration marking the very first true Internet connection—a connection among networks.

The year 1977 marked a critical milestone in the development of the modern Internet and wireless networking. While many people trace the Internet’s origins to the ARPANET of the late ‘60s; in fact the word “internet” means joining different kinds of individual networks together. This kind of internetworking made its formal debut with the three-network transmission of 1977.

On November 22 of that year, an unmarked step van (“the bread truck”) stuffed with futuristic equipment, scientists, and fully uniformed generals quietly cruised the streets of the Bay Area. Only an oddly shaped antenna gave any hint of its purpose. Through the van, data flowed seamlessly between SRI



International in Menlo Park and the University of Southern California 400 miles away via nodes in London and in West Virginia and across three kinds of networks—packet radio, satellite, and the ARPANET.

As it motored down the street somewhere south of San Francisco, this souped-up delivery van sent some information to a computer lab at the University of Southern California, 400 miles away. No one can quite remember what the information was, but that really doesn’t matter. What matters is the way it traveled.

The data didn’t travel as the crow flies. It traveled 88,000 miles altogether, first from San Francisco to Boston, then a trip to Norway and Britain. And from Britain, it bounced

back to Southern California by way of a tiny town in West Virginia.

And it didn’t travel over one data network. Thanks to a certain protocol called TCP, it traveled seamlessly over three networks: a wireless packet radio network covering a few California hilltops, a satellite hookup bridging the Atlantic, and the Arpanet, a wired network that would go on to much bigger things.

Founding fathers Vint Cerf and Bob Kahn were on hand at the November 7 celebration, along with 16 others who helped send those packets across the world and back again. “The point is that we did this over three separate networks,” Cerf said. “It was true inter-networking.”

Cerf and Kahn had worked for DARPA developing the Transmission Control Protocol. TCP is now the protocol that drives the internet. DARPA, of course, had already bootstrapped the Arpanet, a packet switched network spanning various government agencies and academic institutions. The Arpanet eventually morphed into the worldwide spiderweb we use today.

But DARPA also saw the need for wireless transmission. “When you’re in a militarized environment and you’re mobile, you can’t have wires,” Cerf said. “Tanks with wires don’t work very well.”

This wireless 100 to 400 Kbps packet radio network “foreshadowed WiFi.”

The delivery van – the ‘bread truck’ – as it was often called – belonged to SRI International. Since about 1975, the van had operated as a “mobile node” on a packet radio network that stretched across Silicon Valley and up to San Francisco.

On August 27, 1976, the bread truck first used TCP to bridge the gap between the Arpanet and this packet radio setup. Sitting outside a former stagecoach stop in Menlo Park named Rossotti’s, it fired an email across the two networks, shuttling packets through a makeshift gateway developed by BBN (Bolt, Beranek and Newman) in Boston.

*[The 30<sup>th</sup> anniversary celebration of this event was described by Don Nielson in the December 2006 issue of the SRI Alumni Newsletter, page 9.]*

Filled to the brim with some of the most advanced technology of its day, the “Internet van,” as it has since

## HISTORY CORNER (Continued)

been nicknamed, would drive up and down Interstate 280 in the San Francisco Bay Area, broadcasting data at 100 to 400 kilobits per second. Data from the van was sent to Los Angeles and Cambridge, Mass. through telephone lines, and to Sweden and England via satellites.

To view a 2:20 video for a view inside the truck, visit: <http://www.news.com/1606-2-6217835.html>

“For the first time, at least in a ceremonial sense, dissimilar networks were bridged by TCP,” Don Nielson wrote in a 2002 paper (<http://ed-thelen.org/comp-hist/CORE-3-1-SRI-TCP-IP.html>) celebrating the 1976 event.

### Next, three networks

Then DARPA added a third network to the mix: a packet satellite extravaganza that spanned the US, the United Kingdom, Norway, Germany, and Italy. The Arpanet already extended to the UK and to Norway, but for political reasons, DAPRA had trouble extending lines to the rest of Europe.

So, in the fall of 1977, the bread truck went back to work, sending those packets across all three DARPA-funded networks - and a few more gateways. “At this point, we’d demonstrated what all three networks could do, but we’d never gotten all three of them running at the same time,” Cerf said. “TCP was supposed to show how multiple networks could be interconnected, and I thought it would be more convincing if we could do three networks rather than just two.”

The test was also a major milestone in packet radio, the technology that foreshadowed WiFi and other kinds of wireless internet access.

Once those packets left SRI’s radio network, they made their way to Kjeller, Norway and on to London via the Arpanet. Then they were beamed skyward from an earth station in Goonhilly Downs, England, before coming down in the little town of Etam, West Virginia, halfway up the US east coast. And from there, they hopped back onto the Arpanet and made their way to USC. They traveled a total of 88,000 miles.

There was no guarantee, of course, that the first transmission would succeed. “As an engineer, you’re always surprised when a program you write actually works,” Cerf said. When the first bit of data was sent there and back without any

problems, his reaction was a bit of shock. “I said, ‘Holy cow! That actually worked!’”

Noteworthy at the time was that this whole process took a half-second for the bit’s round trip and that the network was reliable and didn’t lose any information. By comparison, the Arpanet at that time could transmit information one way in 100 milliseconds.

### Of Lasting Significance

The SRI project leader, Donald Nielson, said it wasn’t apparent in the late 1970s that riding around in the van was an event of any particular significance. E-mail had already been introduced in 1971, and by 1977, it was clear to all involved that the idea of digital networking would be a part of their future. “We knew that was going to change the world.” Nielson said. But it wasn’t until 1996, when an editor with the IEEE called to ask about the first transmission on that November day in 1977, that he realized that driving the beat-up van around the Bayshore Freeway was a seminal event in the advancement of the Internet.

With four flat tires, a disintegrated steering wheel, and much of the technology that once resided in it gutted, the vehicle sat virtually ignored for a decade or two. That others were interested in this tiny part of the Internet’s history was surprising, Nielson said. “It was kind of a big carcass,” he laughed. But Nielson had it all put back together and almost completely refurbished, but it still isn’t drivable. It’s been outfitted with much of the original technology, including two packet radios, each taking up a cubic foot of space and costing roughly \$50,000 each. The radios in the van now are the only two still in existence, said Nielson, who then had it towed from Moffett Field for a celebration of the 20th anniversary of the Internet at a convention in San Jose.

Perhaps poetically, the van now sits exactly one mile from the sprawling campus of Google, arguably one of the most important technology companies today, and one that would be nonexistent if not for the work of Nielson, Cerf, and many, many others.

“A lot of people think the Internet just happened,” said Cerf, who now works as the chief Internet evangelist for Google. “But it was a lot of hard work.”

*This article was assembled from excerpts from a number of anonymous sources published in journals, newsletters and on the Internet. A much fuller technical account appears in Don Nielson’s book, “A Heritage of Innovation”, 2004.*

## HISTORY CORNER (Concluded)

### Letter to the Editor:

I read your article on Anti-War Protests-Remembering 1969 [August 2007, History Corner, page 4].

I remember those times, but I have a different recollection of one point. Pete Valenti said, "Even some of our own employees chose to join the protesters . . . employees [who] might lose their security clearances . . ."

But I remember being asked to go out and talk with the protesters about the value of our work even though classified, which I did. I don't think it made much difference, but I certainly didn't think of it as "joining" them, and as far as I knew, senior management knew about and approved these contacts.

Steve Brown

### Silicon Wafer Foundry At Sarnoff

Sarnoff Corporation announced that its silicon wafer foundry is now accredited by the Department of Defense Trusted Access Program Office as a Micro-electronics Trusted Source for DoD and all other U.S. government users. Sarnoff will provide its extensive experience and capabilities in integrated circuit (IC) manufacturing for trusted applications.

### Non-invasive Biometric ID

Sarnoff Corp., SRI's subsidiary, had developed a new drive-through system that checks the iris of the driver while inside the vehicle. The system provides an accurate, non-invasive biometric ID without the driver leaving the vehicle.

### DynaSpeak® to be used on Fighter Jet

The F-35 Lightning II, which rolls out in 2008, will be the first U.S. fighter aircraft with a speech recognition system able to "hear" a pilot's spoken commands to manage various aircraft sub-systems, such as communications and navigation. SRI developed the DynaSpeak® speech recognition software and is working with integrating contractor Adacel Systems, Inc., to tailor the system for the F-35 Joint Strike Fighter's airborne environment. The system, which ties in to the plane's onboard computer, will be used to give commands for both communication and navigation. The requested data will then come up in the pilot's helmet display

More: <http://www.af.mil/news/story.asp?id=123071861>

### RECENT RETIREES AND OTHER DEPARTURES OF LONG-TIME STAFF

		Years of Service
July 2007	- Robert L. Dehn	44.1
August 2007	- Virginia E. Weager	33.9
	- Kelli Midori Connolly	13.8
	- Cobbey G. Sova	22.1
	- Duane Hamada	11.4
	- James F. Arnold	22.5
	- Lynn Seaman	33.9
September 2007	- Paul Brown	36.4
	- Philip C. Cosby	33.4
	- Christopher J. DiGiano	10.5
October 2007	- Irene E. Lehan	21.2
	- Cris M. Olsen	27.5
	- Ilona Pl. Berzetei-Gurske	19.7
	- Michael J. Furniss	12.3
November 2007	- David W. Morgan	22.1
	- Constance Y. Lambert	13.9

## SRI FELLOWS AND THE MIMI AWARD WINNER FOR 2007

The 2007 Mimi and Fellowship Awards were presented at a ceremony on November 14.

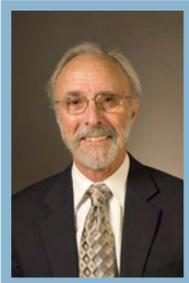
The Mimi Award, named in memory of Marian (Mimi) S. Stearns, who was vice president of SRI's Health and Social Policy Division, is the highest recognition offered to staff members who have fostered the personal and professional growth of their co-workers.

**Carol Green**, Senior Director of the Toxicology and Metabolism Group in SRI's Biosciences Division, was selected to receive the 2007 Mimi Award for her superb leadership capabilities and ongoing mentorship of staff. Green, a pioneer in the study of human cell metabolism, is an internationally recognized leader in the field of comparative metabolism, with more than 100 publications and abstracts in top journals in her field.



The two newest SRI Fellows are John Kelly and Adolf Pfefferbaum.

**John Kelly**, a physicist and program director for the Center for GeoSpace Studies in SRI's Engineering & Systems Division, has been for 25 years a leader in the use of incoherent scatter (IS) radar for remote atmospheric sensing. Under his direction, the SRI-run, NSF-funded facility in Sondrestrom, Greenland has become the world's leading radar of that kind, and his role in moving it from Alaska was a significant achievement. Dr. Kelly was also instrumental in promoting and establishing the Advanced Modular Incoherent Scatter Radars (AMISR) program despite enormous logistical and political barriers, with the result that SRI is regarded as one of the highest-ranking institutions in IS radar research.



**Adolf Pfefferbaum**, director of the Neuroscience Program in SRI's Center for Health Sciences in the Policy Division, has been at the forefront of neuroimaging and electrophysiological research in normal aging and neuropsychiatric disorders for more than three decades.



At SRI, he has focused on devising novel approaches for quantitative neuroimaging data to yield measures of brain structures and tissue composition (using magnetic resonance imaging, MRI), microstructure (MR diffusion tensor imaging, DTI), chemistry (magnetic resonance spectroscopy), and function (functional MRI) in the living human. Dr. Pfefferbaum's research in chronic alcoholism has enabled detection of alcoholism's dynamic course, through drinking, sobriety, and relapse and has demonstrated an increased vulnerability of the aging brain to excessive drinking.

### Biotech Investing Conference

SRI, in conjunction with IBF Conferences, hosted the 15th Annual Biotech Investing Conference on November 5 and 6, 2007 at SRI headquarters. The conference, titled "Building The Next Generation of Successful Biotech Companies," is a forum for industry leaders in biotech to discuss the trends in private and public funding, innovative business strategies, new alternative partners, and the impact of global competition.

### Threat Reduction Contract

SRI has been awarded a \$9.5 million contract by the Defense Threat Reduction Agency (DTRA), part of the U.S. Department of Defense. SRI will lead a drug discovery and development program to identify approved drugs that could also be effective against biological threats. Principal investigator is Rae Lyn Burke, director of SRI's Center of Excellence for Infectious Disease and Biodefense.

## NEWS FROM SRI

### Neumann Tells All at Café Scientifique

On September 11, Peter Neumann, SRI's computers and security guru, led the discussion on Security Issues at Café Scientifique. He amazed the audience of 175 with a long list of the programs now operated by the Department of



Homeland Security (DHS) and other government agencies. A few of them are well known, such as the Patriot Act, FISA, and US-Visit. Lesser known ones go by such names

as Carnivore, ADVISE, Protect America Act, REAL ID, and the CAPPs No-Fly List. As DHS's contractor of choice, SRI has been involved in developing and evaluating many of these programs, including some that Peter could not talk about.

Originally designed to combat terrorism, many of these programs have broadened their scope to become huge data gathering projects. Peter's talk ranged from the use of RFID chips and EEVS Employment Verification to the DNA database maintained by the UK and the FBI.



Even electronic voting records requires a huge database, and many people are concerned about the privacy issues.

All this provided ample fodder for the lively discussion that followed.

Café Scientifique provides a forum for debating science issues outside a traditional academic context. Anyone can come to explore the latest ideas in science and technology. There is no admission charge. Building on its great success outside the United States, Café Scientifique Silicon Valley is the first such Café on the West Coast. SRI is pleased to host this event in the International Dining Room each month and to provide simple refreshments.

The Café meets on the second Tuesday every month from 6 to 7:30 pm. Some—but not a majority—of the speakers are SRI staff and alumni.

More details are available at [www.cafescipa.org/](http://www.cafescipa.org/)

### Wikipedia Article on SRI Stirs Dispute

An alumnus recently came across Wikipedia's treatment of SRI and found it wanting. In fact, he said it was comical in its lack of information. Several others looked at it and thought it was not too bad.

Wikipedia articles are not signed, so we don't know who wrote it. Wikipedia has rules on how articles are written, and they also provide readers a chance to comment and argue. In fact, some reader has recently commented that the SRI history section was "written like an advertisement".

SRI's marketing communications manager, Marty Mallonee, interacted with Wikipedia several times regarding the description of SRI and was successful in making some additions and revisions. But, as you can imagine, Wikipedia isn't keen on marketing people writing company descriptions!

Marty adds: "Alumni can visit Wikipedia and, if they choose to, make edits to the SRI page themselves (that's the beauty of Wikipedia!). One must be careful to write in a "neutral" tone and to cite any claims made (it's not always as easy as it sounds :)"

Have a look for yourself. What do you think??

### Free Software Fights a New Type of Virus

In October, SRI computer scientists Phil Porras and Vinod Yegneswaran released the newest version of their BotHunter tool, a free diagnostic program to help network administrators find PCs infected with an insidious new type of virus that has already tainted millions of computers and used them to generate billions of spam e-mails.

Since this malicious program, variously called Peacomm or the Storm Worm, appeared in January 2007, it has infected upward of a million PCs, each capable of sending out about 28,000 spam e-mails a day. A botnet is the nickname given to illicit computer networks created by malicious hackers who write a type of program called malware. Once the malware gets onto a PC, it turns it into a zombie and connects to the Internet - without the knowledge or involvement of the PC's human owner.

*Eric Pearson has been appointed vice president of SRI's Physical Sciences Division.*

## NEWS FROM SRI (Concluded)

What makes Peacomm such a particular annoyance is that it not only sends out spam e-mails that annoy recipients but it slows down the infected PC in subtle ways. This particular malware changes itself so often that normal anti-virus tools may not keep up.

The new SRI tool attacks the problem from the other end, by giving network administrators the ability to find infected computers on their networks and take steps to cleanse them. "This fix is very close to a vaccine," said Rick Wesson, an Internet security expert with Support Intelligence in San Francisco.

*This article is excerpted from an item by Tom Abate in the San Francisco Chronicle. For the full story, visit: <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/10/08/BUHRSL4CF.DTL&feed=rss.business>*

### Anti-Cancer Drugs

SRI won a \$7.9 million contract from the National Cancer Institute to conduct analytical chemistry evaluations of anti-cancer drugs and dosage formulations.

The contract was awarded by the NCI's pharmaceutical resources branch as part of its Developmental Therapeutics Program, which aims to further the development of promising compounds by providing resources to investigators.

Jennie Wang is the Analytical Chemistry Program Director in SRI's Biosciences Division. She points out that analytical chemistry helps identify and quantify a drug, specifically determining its identity, strength, quality and stability. That provides a clear definition of the drug substance or dosage formulation, leading to safer and more effective therapies.

### Further AIDS Research Grant from NIAID

SRI has been awarded a \$15.5 million contract by the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH), to provide preclinical services for the development of drugs and therapeutic vaccines for the treatment of HIV and opportunistic infections commonly associated with HIV infection and AIDS. SRI will provide a variety of preclinical services in support of development of new therapies including toxicology, pharmacology, pharmacokinetics, toxicogenomics, and other testing requirements to support submission of Investigational New Drug (IND) applications to the U.S. Food and Drug Administration (FDA).

The contract is a continuation of a NIAID contract held by SRI International since 1991. Over the past 16 years, SRI International has provided preclinical services in support of over 200 drugs and therapeutic vaccines at various stages of development.

In addition to this contract for anti-infective therapeutic development, SRI International also runs major NIAID programs for the development of drugs for other infectious diseases. In 2006, SRI International won a \$57 million contract for development of anti-infectives for many viral and bacterial diseases.

### Port Security

SRI has won a five-year, \$36.5-million contract to develop a system for improving port security in the United States. Under this contract with the U.S. Naval Air Systems Command (NAVAIR), SRI will develop a system of radar, sonar, underwater sensors and other devices that work in tandem to warn maritime agencies of threats to ports. Also SRI will install radar that can track vessels almost anywhere in Tampa Bay and to the end of the channel, west of the Sunshine Skyway.

The "Maritime Domain Awareness" system represents the first major project of SRI's National Center for Maritime and Port Security in St. Petersburg.

In further recognition of SRI's new presence in the Tampa-St. Petersburg area, Peter Marcotullio, director of the new SRI facility, was the speaker at the fourth annual black-tie awards gala of the Tampa Bay Technology Forum.

More at: [http://www.sptimes.com/2007/10/27/Southpinellas/Bay\\_port\\_joins\\_terror.shtml](http://www.sptimes.com/2007/10/27/Southpinellas/Bay_port_joins_terror.shtml)

### Powerful Fuel Cell

PolyFuel, an SRI spin-off company, announced the development of a fuel cell stack that is capable of delivering an unprecedented 500 watts per liter of stack volume, significantly advancing the state of the art for "direct methanol" fuel cells (DMFC). The tiny stack – which easily fits in the palm of the hand – delivers a peak power of 56 watts – more than twice that needed to power a typical laptop computer.

## NEWS FROM THE CREDIT UNION



**SRI FEDERAL CREDIT UNION**  
FINANCIAL SOLUTIONS THAT MAKE A DIFFERENCE!

### SRI Federal Credit Union Offers Home Equity Line of Credit

When is a Minus a Plus?

When it's a Prime Minus .25% APR\* Home Equity Line of Credit (HELOC) from SRI Federal Credit Union.

With our HELOC, you get more for less.

There are no application or annual fees and no closing costs. Plus, since our HELOC has no minimum draw, you pay interest only when you use it. The credit limit can be as high as \$500,000.00. It all equals more cash in your pocket.

So if you've been trying to figure out how to do what you want this fall and are looking for a easy solution, we are

here for you. Whether you want bucks for building and addition, cash for holiday gifts or that dream vacation, a Home Equity Line from your credit union is the solution.

Start counting the cash today by calling 800.986.3669.

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*\*Home Equity Lines of Credit (HELOCs) are variable-rate Loans.*

*APR = Annual Percentage Rate, which is subject to change.*

*The APR can change based on the Prime Rate as Quoted in the Wall Street Journal minus .25%. This is for a HELOC with 80% Loan to Value (LTV).*

*All loans subject to credit approval.*

## NEWS FROM ALUMNI – WHERE ARE THEY NOW?

### My Career After SRI by Tak Takaoka

Looking back on 20 years of service at SRI both in Menlo Park and Tokyo from 1966 to 1987, I feel fortunate for several reasons. First of all, many of the staff members are very professional, intellectual, intelligent and good people. Many were graduates of top universities. There is no organization like SRI filled with such people so far as I know. Secondly, there were not much hustle and friction among staff members for promotion as the organization at that time was very flat.

When I was with SRI, I was frequently asked by clients in the US and Europe why Japanese companies can accomplish R&D targets so effectively and efficiently in a very short time, while Japanese companies and government agencies take a long time in setting research targets. Western clients thought that this unique R&D methodology should be available in Japan. But there were no neutral contract research organizations in Japan at that time.

Soon after I left SRI, I determined to set up a high quality neutral contract research company of advanced technologies in Japan, and started seeking a qualified sponsor. I successfully persuaded Osaka Gas Company's top executives

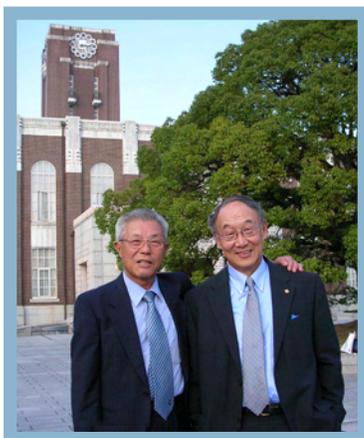
to establish Kansai Research Inc. (KRI) in Kyoto. One of the strategies for KRI to be known internationally and grow was to set up an international advisory council of internationally well-recognized members. Charlie Anderson, former SRI president, kindly accepted to be the chairman. Other council members include Bill Anderson (ex- NCR chairman), Carl Gerstacker (ex-Dow Chemical chairman), Jim Gibbons (ex-Dean of Engineering, Stanford University), Paul Jorgenson (senior VP of SRI), Bob Malpas (ex-BP Chemical chairman) and Louis Stuyt (ex-Nederland health minister). It was a great pleasure for me to call on each of these persons at their home personally to get formal acceptance to be a council member.

After six years, KRI had grown steadily as planned. I decided that my mission was over and left KRI to set up a management consulting firm named Techno Alliance Corporation (TAC) in 1993 with a new concept and mission to provide a high quality, practical and inexpensive international consulting service based on science and technology, including an arrangement of corporate alliances in R&D and business. To achieve this mission, TAC has on retainer experienced senior professionals just retired from major manufacturing companies in Japan. Also to cut the overhead we use a

## NEWS FROM ALUMNI – WHERE ARE THEY NOW? (Continued)

distributed office system and don't keep a big central office space. TAC covers the fields of energy, chemicals, advanced materials, nanotechnologies, biotechnologies, pharmaceuticals, and electronics.

Even 20 years after I left SRI, I still keep close contacts with many of my friends from SRI days. One of them is George Koo, who worked as a senior polymer and chemical economics consultant from 1972 to 1978. He is also a member and former vice chairman of the Committee of 100, an organization of prominent Chinese-Americans.



When George came to Japan in October to attend to the board meeting of a US-Japan-China 3 way J/V company, he stayed at my Kyoto house for four days after the meeting. It was his first experience to stay at a Japanese house, sleeping in the futon on tatami, but he seemed to enjoy it very much.

While he was in Kyoto, we spent one day at Miho Museum, located on a rural hillside in Shigaraki, Shiga. It opened in November 1997. The museum's collection contains over 2000 works and features items from Asian and Western cultures ranging from BC 2000 to 17th century. One wing of the museum displays antiquities from the civilization of Egypt, West Asia, Rome, Greece, South Asia, China, and Islam. Another wing contains vessels, figurines, sculpture, jewelry, and textiles that illuminate fascinating aspects of the rituals, court life, technology, and the cultural exchanges of ancient societies. A third wing surrounds an open-air garden of moss, granite, pebbles, and massive Saji rocks, with a character both pensive and serenely introspective.

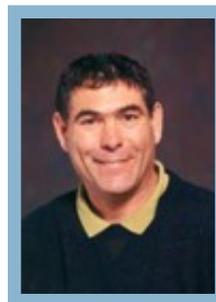
However to me, even more impressive was the architecture of the museum. It was designed by the world renowned architect I. M. Pei, whose other works include the glass pyramid of the Louvre in Paris and the East Wing of the National Gallery in Washington DC. Out of respect for nature, the architect built 80 % of the museum below ground. While the silhouette of the roof has its origins in traditional Japanese architecture, which harmonizes beautifully with the surrounding landscape, the building's contemporary glass structure allows a light-filled interior

space. The entire building gives the visitors rich visions in the splendor of natural light.

On another day, George Koo (at r. in photo) gave a talk at Kyoto University, my alma mater. Kyoto University was established in 1897 as one of two Imperial Universities. At present, Kyoto University consists of 17 graduate schools, 10 undergraduate faculties, and more than 30 research institutes and centers. The University is very proud to claim 5 Nobel Prize Laureates among its alumni. George gave a talk at the Graduate School of Economics called "Three Troubling Trajectories". George discussed the relations of China with US and Japan. Among his conclusions: China can use the Internet and the cellphone to reduce corruption and pollution. Through the Iraq war and the money-driven election process, US has lost the moral high ground in its relations with China. Further improvement of China's relations with Japan awaits Japan's willingness to face the facts of World War II. If an alumni member wants his full text, please contact him at gekoo@deloit.com.

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 "Tak" Takaoka worked with the Process Economics Program, ran SRI's Tokyo Office and marketed and consulted on a wide variety of projects during his tenure at SRI.

Friends of **Richard M. Laine** will be interested to know that he is currently a full Professor in the Dept. of Materials Science and Engineering and Director of the Macromolecular Science and Engineering Center at the University of Michigan in Ann Arbor.



He came to SRI in 1976 after receiving a Ph.D. in Chemistry from USC and three years of post-doctoral work. He was at SRI until 1987; his last role was as Associate Director of Inorganic and Organometallic Chemistry Programs. He left to accept a post as Research Professor in the Dept. of Materials Science and Engineering at

the University of Washington and Director of the Polymeric Materials Laboratory in the Washington Technology Center. Rick moved to the University of Michigan in 1990 and has also been an invited professor in Bangkok, Stuttgart, Rome, and Cadiz (Spain). He is also a Fellow in the Michigan Memorial Phoenix Energy Institute.

The most important areas of research in Rick's group are supported by both government and industrial grants, and include:

## NEWS FROM ALUMNI – WHERE ARE THEY NOW? (Concluded)

- Nanobuilding Blocks, Star Molecules
- Self-lubricating nanoball bearings
- 3-D Nanocomposite Networks
- Transparent Polycrystalline Ceramics.

An recent article in a University of Michigan publication calls Rick a “serial entrepreneur” and notes that while at SRI he “honed his proposal-writing and verbal skills so he could talk to people outside of academia in the commercial world.”

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### Bill Miller Involved in Nanotechnology

William F. Miller, former president of SRI International, may be 81, but he’s not standing still. Not content with his duties at Stanford and his philanthropic activities in environmental protection, Bill is into still another start-up.

His latest venture is called Nanostellar, based in Redwood City. It applies super-small nanotechnology—“quantum chemistry”—to catalytic converters that give a molecular cleaning to diesel engine exhaust. The 30 employees at Nanostellar include 21 PhDs.

According to their website, Nanostellar’s Rational Catalyst Design methodology unites two disciplines – computational nano-science and advanced synthetic chemistry – to speed the pace of development for nanoscaled catalytic materials for diesel emissions control. Nanostellar’s novel engineered nano-alloys clean up diesel exhaust from automotive and stationary diesel engines more cost effectively than traditional materials. Catalyst performance is improved by 25%-30%. Three catalysts, based on gold, palladium, and platinum, are now offered.

Nanostellar was named in the list of companies honored in the first annual GoingGreen 100. This list of the hottest private companies in “greentech” was compiled by AlwaysOn: The Insider’s Network.

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*Parts of this article were based on an excerpt from a longer article by Scott Harris that appeared in the SJ Mercury on May 6, 2007.*

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### Hammond Travel Fund Established

Former colleagues and friends of geophysicist and space physicist **Dr. Carl “Max” Hammond** are establishing an endowed student travel fund in his memory through the American Geophysical Union. Beginning in 2008, the Carl Max Hammond Travel Award Fund expects to provide travel grants up to \$1000 annually to students to attend AGU meetings.

Max Hammond was a physicist in the Applied Electromagnetic Laboratory at SRI from 1996 to 2001. He received his PhD in physics from UCLA in 1993 and he worked at Georgia Tech, the Marshall Space Flight Center, and the Los Alamos National Laboratory before coming to SRI. Max had just moved back east to begin working at the MITRE Corp. and was on the second plane that crashed into the World Trade Center on Sept. 11, 2001.

At SRI, Max created the SRI Wave Tank facility, now known as the Max Hammond Wave Tank. His name also appears on a plaque on the bench in the birch grove between buildings P and 320.

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### Steam Car Expert

**James D. Crank** worked at SRI on explosive cladding of materials for cylinder construction in Porsche and Mercedes-Benz, among other projects. Now retired from Lockheed and one of the foremost experts on automotive steam engine systems, Jim has been appointed by Cyclone Power Technologies, Inc. (Pompano Beach, FL), as a senior technology consultant and Board of Advisors member.

Jim also has over 50 years experience in restoration, repair and driving of various steam cars, and the design and construction of the steam car that holds the current world speed record. He served as a consultant on steam car restoration to Harrah Automobile Collection and the Besler General Motors Chevelle steam car, among others; and a consultant to the State of California on the steam bus development program.

Jim lives in Redwood City. He is the owner and president of Doble Steam Motors Corporation, and is currently working on a book about the history of the Doble steam car and its founding family.

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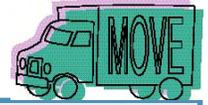
## MORE ALUMNI NEWS

### *WELCOME!* NEW ALUMNI MEMBERS

The SRI Alumni Association welcomes new members:

Karen Baxter  
Mimi Campbell  
Judy Foster  
Jim Gaddie  
Tom Humphrey  
Irene Lehan  
Virginia "Ginny" Weaver  
Karin Zimmermann

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



### *Alumni Members on the Move:*

Stephen Brown from Oakland to Alameda

William Edson from Cupertino  
to Fairfield

Eugene Moore from Midland, MI  
to San Leandro, CA

Lee Ruggels from Lindsborg, KS  
to Santa Rosa, CA

Edward Wood from Portola Valley  
to Menlo Park

## ALUMNI MEMBERSHIP RENEWAL

**Renewal reminders mailed in November 2007 are due December 15, 2007 IF you want your name to appear in the 2008 Alumni Directory which will be mailed in early January 2008.**

### DIRECTORY ADDENDUM

**The enclosed addendum sheets (covering the period of July 31 to November 30, 2007) contains changes and/or corrections, new, and newly renewed members. Please add to your 2007 Directory.**



## IN MEMORIAM

### Paul DiLeo

Paul DiLeo, a former staff member, recently died. He began his career at SRI in 1983 and retired in 1997. At the time of his retirement he was a Senior Property Administrator in Support Operations.

### Thomas Drewek

Thomas J. Drewek died at his home in Palo on November 10. He was 86.

Tom was born in 1921 in Milwaukee, and first came to California in WW II when he was assigned to the Army Signal Corps radio school on his way to service in New Guinea and the Philippines.

He worked at the Kaar Engineering Corp after the war, and joined SRI in 1953.

Tom was a member of the SRI ERMA Project Team that received the Gibson Achievement Award for its success in developing the automatic check handling and clearing system for the Bank of America. He was an Engineering Associate in the Advanced Technology Division when he retired in 1984.

Besides Rose, his wife of 64 years, he is survived by sons Paul of Wahiawa, Hawaii and Mark of Orangevale, CA; daughters Edith Drewek of Sunnyvale and Ruth Gravanis of San Francisco; a sister, a brother, and two granddaughters.

### Deborah Kim Emery

Deborah Kim Emery died on Oct. 30 in Stanford Hospital from the effects of a stroke. She passed away peacefully with her family at her bedside. She was 35.



Born May 4, 1972 in North Hollywood, she moved with her family to Modesto in 1973 and to Palo Alto in the early 1980s, where her parents ran The Cookbook, a restaurant in Town & Country Village. Deb graduated from Gunn High School in 1990 and earned a B.A. in Developmental Psychology from UC Berkeley in 1994. After graduating, she worked with several nonprofit organizations, teaching and directing programs for children.

Deb joined SRI in the Center for Technology in Learning in 1998 during her graduate studies. She married in 2000

and earned a doctorate in educational psychology at Stanford in 2004. Upon graduation, she became a full-time formative evaluator in CTL. In 2006 she moved to the John W. Gardner Center for Youth and their Communities at Stanford. There she focused on the developmental and social aspects of learning, particularly as they relate to connecting academic research with hands-on practice in schools and the community.

At the time of her death, Emery was co-teaching an undergraduate course, *Contexts That Promote Youth Development*, in the School of Education. Earlier she had co-taught *Designing Learning Spaces*, a course connected to the school's Learning, Design and Technology Master's Program..

She is survived by her husband, Brian Emery, her daughter Kaia Kim Emery, born June 16, 2004; her mother, Agnes Kim; her father, James Kim and her sister, Jennifer Choi.

### Bill Goree\*

William Strozier Goree, age 72, died Sunday July 22 at his home after a short, courageous battle with anaplastic thyroid cancer. World-renowned for his tremendous contribution to the fields of geophysics and cryogenics, he invented and developed magnetometers that revolutionized the field of paleomagnetism.



Bill was born June 21, 1935 in Birmingham, AL. After high school, he enlisted in the Army, where he was assigned to the Explosive Ordinance Disposal Unit along with his twin brother, Jimmy. Upon leaving the service he enrolled at the University of Florida where he earned three degrees: a BS in Mechanical Engineering, an MS in Engineering Mechanics, and a PhD in Solid State Physics. He began his SRI career in 1964 designing and producing superconducting rock magnetometers. He was a senior physicist in the Physics and Chemistry of Fluids Department and also served as Chairman of the Low Temperature Physics Department.

In 1969, Bill left SRI and moved to Pacific Grove to form William S Goree, Inc. (WSGI), dedicated to serving the paleomagnetic and geophysical sciences by providing state of the art rock magnetometers. Since 1981, WSGI has collaborated with Applied Physics Systems in Mountain View (as 2G Enterprises) to sell complete magnetic measurement systems to the geophysics community under the name of Superconducting Quantum Interference Device (SQUID) rock magnetometers. These

## IN MEMORIAM (Continued)

instruments allowed researchers in paleomagnetism to measure the weak magnetism of rocks at higher sensitivity and faster than had been possible before, which permitted the determination of the record of the geomagnetic field in materials that could not be analyzed previously. New types of measurement, such as the measurements of long cores, revolutionized the field. It had been Bill's great pleasure and life's achievement to provide these to the geophysics and paleomagnetic community, of which he was a vital part.

Bill also pioneered in the cryogenic processes needed to operate the instruments at low temperatures. His models had progressively longer helium hold times, thus reducing the maintenance chores and the costs of operation. In just the last year he had introduced the Kelvin pulse tube cryocooler, eliminating the need for liquid helium.

Ironically, on the day that Bill's death was announced, he was nominated to receive the William Gilbert Award of the American Geophysical Union's Geomagnetism and Paleomagnetism Section.

Outside of work, Bill liked to fix things, work on cars, and do home repairs. He enjoyed golf, cross-country skiing, snowshoeing, karate, yoga and mountain biking. But more than anything he loved to go camping, fishing, hiking and exploring with his grandchildren.

Bill is survived by his wife of 32 years, Lynn Goree; brother James; son Charles Hornisher; daughters Lauren Keaton and Dana McClain; and three grandchildren.

Bill's daughter Lauren Keaton has been business manager of WSGI for the last 10 years and will continue to run the company along with senior technicians Daniel Keaton & David Schuler.

### James Ma

James Ju-luan Ma died among family on September 17 in San Francisco from complications of Alzheimer's and Parkinson's diseases. He had worked in the Process Economics Program in the Chemical Industries Center for more than 25 years, specializing in the technology and economics of processes for abatement of air and water pollution. He was 83.



Born in Yunnan Province, China, in the remote county seat of Mengzi in 1924, Jim earned a spot as a member of a group known as the "Yunnan Prep Academy Boys,"

who received scholarships from the Yunnan provincial government to come to the United States to study applied sciences at the end of World War II. The group was airlifted over the Hump of the Himalayas by military transport and proceeded on the Swedish ship S.S. Gripsholm, which arrived in New York harbor on VJ Day.

Jim earned a B.S. in chemical engineering at the University of Illinois. Then he completed an M.A. and--in 1950--a Ph.D. in chemical engineering at Ohio State University, where he met his wife, Margaret. His first job was at Allied Chemical in Philadelphia, followed by positions at Lukens Steel and at Union Bag-Camp Paper. For many years he and his growing family lived in West Chester, PA.

In 1975 Jim came to SRI International as a senior consultant in the Chemical Process Economics groups. He became an expert in several important areas, including ethylene production and market research for chemicals in the Asia-Pacific region. He created and marketed the first of a series of Environmental Economics Handbooks. In 1980, Dr. Ma returned to China--for the first time since his student days--as a distinguished lecturer at the China Petrochemical Institute. He made several subsequent trips to his homeland, where he helped set up a petrochemical plant in Henan Province. Jim retired in 1994, but continued to work part-time until 2001.

Besides his wife Margaret, he is survived by sons Christopher of Washington, DC and Philip of Shanghai; daughters Louise and Kathryn, both of San Francisco; and nine grand-children.

### Eleanor Malone

Eleanor Malone, a former staff member, died on Aug. 23. She starting working at SRI in 1978 and retired in 1995. She worked in the Geoscience and Engineering Center as an administrative specialist.

### Drugs for Infectious Diseases

In an editorial written for Drug Discovery News, Jon Mirsalis, managing director of SRI's Bio-sciences Division, argues for increased efforts for the fight against infectious diseases. He explains the differences between orphan and neglected diseases and the important roles that can be filled by pharmaceutical companies, foundations, and nonprofit organizations.

## IN MEMORIAM (Concluded)

### Hardy Pruitt



Warren Harding Pruitt, 85, died at his home in Sunnyvale on September 19.

He joined SRI in August 1959 to be the cook on the MV Acania, beginning with a scientific mission in Antigua. He remained with the ship for six years, both in the Atlantic and

the Pacific, supporting scientific experiments focused on missile re-entry effects and nuclear effects on the earth's upper atmosphere. (When the Acania was between contracts George Durfey put him to work doing wiring on the Big Dish so as not to lose such a great cook!)

Hardy returned to Menlo Park in 1965 as a Maintenance Technician in the Radio Physics Lab and progressed to Senior Mechanical Technician in 1974. He retired in 1991.

One of his areas of expertise was in expediting large and complex shipments all over the world, coordinating with ports, airlines, and ships. In 1982, he traveled to Seattle to oversee the movement of a large radar installation, contained in hundreds of crates of parts, from Alaska to Greenland. He kept complete and accurate records so that researchers knew the exact status, location, and contents of each crate at every stage of the process. His skills and his calm and friendly demeanor reflected well on SRI.

Hardy's survivors include son Kenneth and Daughter Cynthia. His wife Hanna died in 1985.



### Lynn Seaman



Lynn Seaman, Senior Research Engineer in the Poulter Laboratory, passed away August 19 after a short bout with brain cancer. He was 74, and was a leading authority in shock wave physics.

Lynn was born in Arkansas in 1933 but spent most of his life in California.

He served in Germany with the US Army, then attended UC Berkeley. He earned a BS in civil engineering in 1959 (winning the University Medal as top student in his class) and went on to earn a PhD, also in civil engineering, at MIT.

Lynn joined SRI's Engineering Division in 1961 and transferred to the Poulter Laboratory in 1967. He developed computational models for predicting outcomes of impact and explosive loads on materials and structures. An authority in the mechanics and physics of fracture, Lynn published more than 100 technical articles, regularly reviewed submissions to professional journals, and delivered invited lectures and courses at universities in America, France, Germany, Switzerland, and China.

Even after "retiring" in 1998, Lynn continued to work about half time, bicycling to SRI nearly every day until August 2007.

Outside work, Lynn's interests included drumming, wood sculpture, and the stock market. He was skilled in carpentry and construction, renovating several houses. He enjoyed music, hiking, bicycling, tennis and racquetball. He was also adept at several foreign languages and tutored at Menlo-Atherton High School.

Lynn's survivors include his wife Renate Cords of Redwood City; son Mark of New York; daughters Peggy Wonder of Staten Island, NY, Ellen Womack of Mt. View, and Tanya Seaman of Philadelphia; brothers Carl and Lloyd of Nevada; former wife Elisabeth Seaman of Palo Alto; and four grandchildren.

\*SRI Alumni Association Member

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