Sandia experts field flurry of media calls in wake of busted British terror plot

Last week's foiled terrorist attack aimed at blowing up as many as 10 airplanes over the Atlantic was stopped short by British authorities. The attackers apparently planned to bring down the planes by smuggling liquid chemical explosives disguised as drinks onto the aircraft. Reports said the intention was to mix liquids and assemble bombs in flight with various components.

Immediately after news of the foiled terror plot broke, Sandians John Parmeter and Kevin Linker, experts in the general area of explosives detection and members of Contraband Detection Technologies Dept. 6418, spent a hectic couple of days fielding questions from members of the national and local media. Among news outlets they talked to were the Los Angeles Times, Boston Globe, Baltimore Sun, The Associated Press, New Scientist, Albuquerque Tribune, KOB-TV Channel 4, and inquiries from CNN, Nightline, and Wired magazine, among others.

John says he doesn't know what specific materials were to be used. He says there are materials that are not explosive individually, but when mixed with other materials become explosive.

*ANFO (ammonium nitrate/fuel oil) is a well*

Sandia develops contaminant warning systems for EPA to monitor water systems in real time

By Michael Padilla

By Chris Burroughs

Sandia researchers are working with the US Environmental Protection Agency (EPA), University of Cincinnati, and Argonne National Laboratory to develop contaminant warning systems that can monitor municipal water systems to determine quickly when and where contamination occurs. It’s all part of the EPA’s Threat Ensemble Vulnerability Assessment (TEVA) program to counter

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Sandia National Laboratories

What's what

There was shocking news in Albuquerque last week: The two Krispy Kreme doughnut stores closed. Not just while they mixed up a fresh batch of batter — closed! For good!

Everybody (everybody in his/her right mind, anyway) wants to be healthy, and many of us are on diets. Okay, so most of us just give it a sideways glance now and then — that's still some degree of awareness.

But when weight-watching becomes so obsessive it wrings the profit out of Krispy Kreme to the point of shuttering doughnut shops, well ... where could it all lead? No Krispy Kreme doughnuts for Friday mornings at work, that's where! Nevermind the fries will disappear from McDonald's, your BLT will come with turkey bacon and no-fat (no-taste) mayo, there'll be fat-free frozen yogurt in your milkshake, and who knows what else.

There's Where the Kingston Trio or Peter, Paul and Mary or Bob Dylan when you need a good protest song ...

With apologies to Lab News Editor Bill Murphy, that law named for someone way back in his clan was invoked while I was vacationing in Kentucky over the Fourth of July holiday.

About 10 o'clock one night, I got a call from the alarm monitoring folks that they were getting a "low-battery" notification from my house. Initial concern was eased after the on-call people at the alarm company reassured me that no zone had been breached and everything was okay and I was told about 30 days to replace the battery.

Hearing about heavy rains in Albuquerque during that week, I wondered if the roof had leaked anywhere. That anxiety was replaced with another as soon as I opened the door and an unpleasant odor greeted me. The fridge had died while I was away and lots of food had spoiled. That was Sunday.

Monday evening after work, I bought a new fridge. It couldn't be delivered until the end of the week.

Tuesday morning I got in the car, pushed the garage door-opener button, started the engine, backed out, pushed the door-closer button and ... nothing. The opener part of the logic board had died. I think it was that evening — incidents all began to run together), really heavy rain swamped the city and the roof did leak, although only a little and only in one place, which I had known needed attention (grumble, grumble). That was the last really heavy rain and the roof didn't leak any more.

After two visits by garage door repair folks over a week and a half, I bought another garage door opener and a third garage door repair guy installed it. The new fridge was delivered. There were a couple of dry days so I could repair the roof.

There's a lot of talk about these days about the cost of travel, and I can tell you — it's all true.

— Howard Kercheval (844-7784, hckerch@sandia.gov)

Labs technology, partnerships honored by tech transfer group

The Sandia developed Altren a Radar-Resonant Tag Sensor, a device that helps prevent friendly fire incidents in combat, has been named a Notable Technology Development winner in the 2006 Federal Laboratories Consortium (FLC) Mid-Continent regional awards. Sandia also had two winners in the Regional Partnerships category: the University Alliance Program and the Sandia Science and Technology Park.

Awardees were honored at the upcoming FLC Mid-Continent regional meeting later this month in Colorado Springs. At that meeting, Sandia will also receive a special recognition for its work zing-past and present accomplishments in the FLC Mid-Continent Regional Award program.

FLC is a technology transfer organization created by legislation to be a central coordinating, support, and educational organization for federal technology transfer. For more information, contact Carole Lojek (9104), 284-2583, or Jackie Kerby Moore (9105), 845-8107.

TVC makes technology maturation funds available

Up to $100K per project available to develop promising technologies for the marketplace

Technology Ventures Corporation (TVC) is making available technology maturation funds of up to $100,000 per project to help mature selected federal technology projects with potential high commercial value. Qualified applicants for TVC technology maturation funds must be submitted in accordance with the 2006 TVC Technology Maturation Fund application Guidelines found at http://www.techventures.org/about/TechnologyMaturationFund NºInitiative.php.

Interested applicants should submit their application to TVC and then notify Licensing and IP Management Dept. 9104. If you need help completing the application, TVC personnel are available. The deadline for applications to be received at TVC is close of business Sept. 8.

TVC is a nonprofit organization founded by Lockheed Martin in 1993 and funded by Lockheed Martin and the National Nuclear Security Administration. It was established to help national laboratories, regional universities, and small businesses secure venture capital investment to move technologies into the marketplace.

Employee death

Paul Linke of Technical Surveillance Count-measures Dept. 301 died Aug. 9. He was 49 years old.

Paul had been at Sandia nearly eight years. He is survived by his wife Cynthia, sons Nicholas, Kevlin, David, Steve Tartaglia, daughter Kacie Tartaglia, and father Marvin.

Retiree deaths

David L. Scharf (age 78) ... May 23
James A. Duggar (69) ... July 1
James M. McKenney (80) ... July 2
Einar V. Forsman (90) ... July 2
Roy E. Brett (81) ... July 8
Lloyd C. Miller (83) ... July 17
Charles W. Harrison (92) ... July 18
James E. Hare (78) ... July 19
Albin J. Canute (80) ... July 24
Betsy C. Hogan (83) ... July 26
Phillip R. Owens (85) ... July 26
Raul Sanchez (88) ... July 27
R.E. Peppers (64) ... July 29

For the record

In the Aug. 4 Lab News, Frank van Swol's (1114) name was inadvertently left out of a story titled "Sandia researchers solve mystery of attractive surfaces." The research paper on which the story was based was published in the Aug. 3 Nature, and was authored by Seema Singh, Jack Houston, Frank van Swol, and C. Jeffrey Brinker.

***

An article in the July 21 Lab News inadvertently excluded fork/lift rodeo team members.

Mona Anderson (10531), project budget coordinator, and Lynn Ruiz (10872), facilities liaison.

For Lab News Reader Service

Retirees (only): To notify of changes in address, contact Benefits Dept. 3332, Customer Service; at 505-844-4237, or Mail Stop 1021, Sandia National Laboratories, Albuquerque, NM 87185-1021.

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Employee: To change the number of copies of the Lab News your mail stop is receiving please call Honario Anaya, Mail Services Team 10268-4, at 844-4796. At Sandia's California contact the Lab 5 North Room at 294-2427.
Sandia biofuels initiative pushes forward with Monsanto CRADA; will stretch Labs' bioanalytical imaging and analysis

Organizations will initially partner in bioanalysis of crops, study of plant tissue samples

By Mike James

Sandia and Monsanto Company have announced a three-year, $1.5 million cooperative research and development agreement (CRADA) that is expected to play a role in both organizations’ interests in biology and bioenergy. The partnership is aimed at aligning Sandia’s capabilities in bioanalytical imaging and analysis with Monsanto’s research in developing new seed-based products for farmers, including corn products that may be able to produce more ethanol per bushel.

“A strategic relationship with Monsanto makes sense on many levels and will bolster our collective long-term objectives in bioenergy and biofuels,” says Terry Michalske, director of Biological and Energy Sciences Center (BESC).

Recent biotechnology endeavors at Sandia have focused on developing and aligning new tools to help researchers identify early signs of infectious diseases through protein interactions and biomarkers at the single cell and whole-organism scale. Sandia also is planning a key role in a multi-laboratory effort to bring a DOE-funded bio-research facility to the San Francisco Bay area.

DOE’s Office of Science relented a solicitation earlier this month for one or more such facilities, with a focus expected to be on cost-effective, biologically based renewable energy sources to reduce US dependence on fossil fuels.

The Monsanto CRADA will initially focus on hyperspectral fluorescence imaging and spectral analysis. Under the partnership, researchers from the two organizations will apply Sandia’s hyperspectral imaging and multivariate image analysis technology to aid in the study of plant tissue samples of interest to Monsanto. Hyperspectral imaging is an advanced scanning technology that provides significantly more information than other approaches, necessitating the use of sophisticated computational analysis.

The research is expected to enhance current crop analytical technologies, offering an additional technological resource to support Monsanto’s robust product discovery engine and development pipeline. Monsanto’s crop analytics research program has recently played a role in discovering new seed-based products for farmers, including corn hybrids that offer more ethanol per bushel and soybean varieties that produce healthier oils for consumers.

“Seeking out new and innovative scientific tools is an important part of how we bring forward new technologies for the farmer,” says Terry Das, director of crop analytics for Monsanto. “This partnership provides Monsanto with a new opportunity to further bolster our existing crop analytics program, offering our researchers another way to better understand genomic profiles for seed and trait development.”

Sandia researchers in New Mexico will investigate and develop further the Labs’ hyperspectral imaging and multivariate data analysis methods and capabilities for agricultural product discovery and development applications.

Terry says researchers at the Combustion Research Facility could eventually benefit from the CRADA by gaining experience with agricultural samples that have bioenergy/biofuel applications and uses.

Ancillary research focusing on the photosynthetic properties of various plants and microbes, for instance, will add to the Lab’s growing expertise in understanding the conversion of sunlight to sugars, relevant not only to the production of biofuels but also essential to the global carbon cycle and carbon sequestration.

Monsanto Company is a leading global provider of technology-based solutions and agricultural products that improve farm productivity and food quality. For more information on Monsanto and the company’s products, see www.monsanto.com.

Rafael Davalos to receive HENAAC award for Most Promising Engineer, Advanced Degree

By Iris Aboytes

In the sixth grade Rafael Davalos (8125) wrote a computer program to help first-graders learn addition and subtraction. Since that promising beginning, Rafael has come a long way. In October Rafael will receive an award from the Hispanic Engineer National Achievement Awards Corporation (HENAAC) in Anaheim, Calif., for Most Promising Engineer or Scientist, Advanced Degree.

After receiving his undergraduate degree from Cornell University in mechanical engineering, Rafael came to work at Sandia. “This was an opportunity that has had a great impact on my life,” says Rafael. “I am extremely grateful to Sandia and the doors they have opened for my career.” He went through the One Year on Campus Program and received his M.S in mechanical engineering from the University of California, Berkeley.

Back at Sandia, Rafael was assigned to lead the development of a radiometer detection technology for unmanned aerial vehicles (UAVs) to monitor the effects of global warming. He then became the lead mechanical engineer for a US Navy flight test unit and its telemetry system. The project was a success and Rafael was given the opportunity to work full-time on his PhD through Sandia’s Doctoral Studies Program. When he earned his PhD in bioengineering, one of his dreams came true.

Rafael’s father, Alejandro, came from Cuba at age 18 with nothing but a bag of clothes, but he was determined to learn, work hard, and succeed. His mother, Myra, came from the Dominican Republic. She left her family at age 14 to escape from the Trujillo regime, where she was being pressed to become a concubine for the dictator. From Myra, Rafael learned about obstacles being surmountable. She instilled in him a passion for helping others achieve their goals.

A neighbor helped Rafael shape his future. She gave him access to a computer when he was in third grade. Rafael discovered a new world. That sixth-grade computer program was his first step in helping others.

While attending school, Rafael was a volunteer teacher and tutor for several outreach organizations. He and a group of Hispanic engineering students chartered the Latino/Latina Association for Graduate Students in Engineering and Science while working on his master’s degree.

Rafael is a member of the Hispanic Leadership Committee and chairman of the Diversity Division Council at Sandia/California. He represents Sandia on the Berkeley Edge Program Planning Committee, a National Science Foundation-sponsored program to encourage traditionally underrepresented students to attend graduate school in engineering and science.

Rafael is currently the principal or coprincipal investigator on three projects developing microfluidics for homeland security and biomedical applications — rapid, low-cost bioagent detection for subway protection; devices to interrogate single cells and micro-reaction chambers for faster biodetection.

Rafael and his wife Michelle have been married a year — another dream come true. Michelle does graphic design and office management for a small family-run engineering company started by her father. Rafael says she puts all the superlatives in my life,” he says.

Rafael is happy to receive this award and is looking forward to working full-time on his master’s degree, and father. His father’s words ring true: “Only through hard work can one gain self respect.”
**Explosives**

(Continued from page 1)

known example,” he says. “This has been used in numerous cases to make bombs in the UK.”

Ammonium nitrate by itself is not considered an explosive, but when mixed with fuel oil it becomes an effective explosive.

“The mixture is normally solid, but there are ways you could probably make it more like a liquid slurry,” he says. “There are some materials made of two components, where at least one component is a liquid, that would not be considered explosives separately but would make an explosive if mixed.”

He says “liquid explosive” is a catch-all term and can include a variety of chemicals such as nitroglycerin and related compounds, and ammonium nitrate slurries.

Some explosives can be used in both liquid and solid forms. Pure nitroglycerin is a liquid at room temperature, but Alfred Nobel’s invention of dynamite is a widely used solid explosive based on nitroglycerin, he says.

“With both liquids and solids there are things one could do to make the explosive more or less stable — i.e., more or less sensitive to detonation,” John says.

John works alongside other Sandians whose primary work is in trace explosives detection system development and test and evaluation of explosive detectors. Kevin and others in the department have been involved in the development of trace explosives detection ports for personnel screening, as well as handheld explosive detection systems.

**Liquid explosive detection**

Detection of liquid and solid explosives can in many cases be done using the same types of trace chemical sensors, he says. Furthermore, if an explosive is made by combining two components that are not explosives themselves, it does not follow that a trace sensor used for explosives detection could not detect the individual components. “If a sensor detects a mixture, it will normally detect at least one of the components,” he says.

**Water tests**

(Continued from page 1)

threats against water systems. The program uses a suite of software tools that can simulate threats and detect vulnerability in drinking water systems, measure potential public health impacts, and evaluate mitigation and response strategies.

The EPA has been particularly concerned about potential water system contamination after the Sept. 11, 2001, attacks in Washington, D.C., and New York. U.S. water systems consist of large networks of storage tanks, valves, and pipes that transport clean water to customers over vast areas. By the very nature of their designs, they provide multiple points for potential contamination — either from natural or manmade sources.

“Our involvement dates back about three years ago when the EPA became aware of some LDRD [internally funded Laboratory Directed Research and Development program] research we were doing to model threat assessments to water systems,” says Sean McKenna (6115), project lead, says the Sandia software “helped the EPA meet several internal milestones over the past year,” including developing a contaminant incident timeline for the EPA’s WaterSentinel program and working with a large city water utility to determine the best locations for sensor placement. The WaterSentinel Program is being developed in partnership with select cities and laboratories in response to a Homeland Security Presidential Directive that charges the EPA to develop surveillance and monitoring systems to provide early detection of water contamination.

The EPA will test Sandia’s event detection methods later this summer at a large water system. “These tests (that the EPA will conduct) will assess Sandia’s event detection methods so that we can understand how to respond more intelligently to contaminations as they occur,” Bill says.

Sandia’s event detection methods have been specifically tailored to use a variety of affordable, off-the-shelf devices commonly used by water utilities to monitor water quality.

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Symposium

(Continued from page 1)

students, preparing a presentation for the first time also meant learning the processes of peer review and Sandia’s approval procedures.

“Where many presenters described the entire scope of whatever project they had been a part of, I was only able to give my attendees a fairly limited view of some of the work I did, due to my project’s sensitivity level,” says Jesse Herrera (2124), who gave a presentation dealing with weapons coding and verification.

“Making such specific and highly technical information interesting to others was tough but with some enthusiasm and patience, I took on the challenge,” he says.

Like Jesse’s presentation, the majority of the projects at the symposium were highly technical, but a few interns took a creative approach in presenting their non-technical projects.

“While working in the student internship office this summer, I reviewed hundreds of student expense vouchers,” says Jenny. “As a reflection of that work, I created a false voucher that was ripped with the same errors I saw every day, and then showed how to fix them. I hoped my presentation could save relocating students, as well as myself, a little time.

“In a symposium filled with technical presentations, it never occurred to me that I would have such a great response,” she says. “I had many people stop at my poster and say, ‘Oh finally, something I understand,’ and then stay and talk with me for several minutes.”

Wide spectrum of work represented

The symposium gives attendees the opportunity to see a wide spectrum of Sandia’s work represented, as well as a chance to gather from each other’s experience and knowledge, says Rebecca Vickers (10861).

“It was really exciting to see all the work and knowledge we had gained during the summer come together into one final product,” says Rebecca, who gave a presentation on retro commissioning — a process for improving energy efficiency — of institutional general plant project buildings. “We were able to share everything we had learned with other people. We also had the satisfaction of knowing that the research and work we did would continue to be used in the future.”

Participating in the annual symposium is entirely voluntary, and although not all students choose to present projects, many still attend just to have the chance to see the variety of presentations.

“Being here, I get a chance to see things that are outside my technical area that I wouldn’t get to see otherwise,” says Dominic Saavedra (13022), who works in safety engineering.

“I really like going to the symposium each year because it brings all the students to a common place, and at the same time allows us to realize how many areas of research are out there and available,” says Judy Banet (13025).

Some 85 students delivered short lecture presentations on a variety of topics at this year’s symposium. Presentations ranged from areas of government relations (Valerie Salim, 12121), to approaches for addressing spent reactor fuel (Courtney Cox, 6904), to pathogen removal from water (Carlee Ashley, 6118).

A career fair offered fellowship opportunities, graduate school recruitment, and employment opportunities from Lockheed Martin. Other activities included a graduate opportunities panel, a luncheon featuring talks by Sandia President Tom Hunter and motivational speaker Derius Swinton, two workshops, and an evening reception.

Center 2400 earns coveted ISO 9001:2000 certification

By Darrick Hunt

During World War II, the United Kingdom had a growing problem in its bomb factories — the bombs were detonating before ever leaving the assembly line. The Ministry of Defense was understandably alarmed by these developments, and in response had inspectors stationed in the factories that supplied munitions. To continue producing munitions for the government, the companies had to write up their procedures for making their product, have the procedures approved by the Ministry, and ensure their workers followed them.

This concept of control and inspection is the basis for today’s International Organization for Standardization (ISO) quality management systems. ISO 9000 is a standard of conformity that ensures work is done in compliance with defined, continuously improving processes.

In accordance with this business management standard, Sandia’s Manufacturing Science and Technology Center 2400 has become the Labs’ most recent recipient of ISO 9001 certification.

The center began using the business model based on its implementation of the ISO 9000 family of business standards. It is intended to be a framework for management systems to provide assurance that products conform to established standards as well as giving customers assurance of their purchase.

The center became aware of ISO 9000 as a way to improve its business interactions several years ago when one department in the center began using the business model. As the center continued to evolve, its example was soon adopted throughout the entire organization.

Center 2400 was chosen for certification based on its implementation of the processes and systems necessary to have an effective business management system. These processes include a robust internal audit and management review system, a corrective and preventable action tracking process, a customer communications procedure, measures for customer satisfaction, and continuous improvement of the overall business management system.

“Congratulations are really in order to all the employees in Center 2400 for their recent accomplishment obtaining ISO 9001:2000 certification,” says ISO 9000 Program Manager Felipe (Phil) Rivera (10743). “This took a concentrated team effort and I am proud of the achievement.”
Before modifying or buying equipment, check to find out if an environmental permit is required.

By Chris Burroughs

Before you modify it, buy it, install it, or operate it, you must first find out if you need to run a National Environmental Policy Act (NEPA) checklist to determine if an environmental permit is required.

By doing so, you’ll be helping the Labs avoid costly fines that hurt not only the pocketbook but also the Labs’ reputation.

The first step, says Terry Cooper, manager of Environmental Compliance and Assurance Dept. 10333, is for people wanting to modify existing equipment or buy, install, or operate a new piece of equipment to work with their line management and look at the Dept. 10333 web page as a resource. Then call Dept. 10333, explain what is needed, and work with a department representative to determine if a NEPA checklist is necessary.

If a checklist is a must, the appropriate person in Dept. 10333 will help you work through the list. The end result will be a determination about whether an environmental permit is required. Dept. 10333 has subject matter experts for waste, water quality, air quality, and NEPA checklists.

Because this simple process has not been followed in the past, Sandia has incurred fines.

“Here’s a true-life example of how people get in trouble. Someone bought a new piece of equipment and installed it, not aware that the equipment produced small amounts of emissions,” Terry says. “Sandia wound up receiving a fine for this because the appropriate permit was not acquired in advance. If the owner had only checked with my department in advance and gone through the NEPA checklist, the whole situation would have been avoided.”

Entities requiring permits are the Environmental Protection Agency, city, and state.

Terry adds, “Sandia is a very large and complex operation with diverse programs requiring a variety of commodities. So before you make a modification or purchase and install a piece of equipment, you should check with your management and consult with us. We are here to help our line customers and get everything taken care of. We want to do it legally and properly.”

What may appear to be a routine and simple equipment modification, purchase, or replacement may trigger environmental permitting requirements with long lead times and costs prior to installation. With Dept. 10333’s help, the design or size of equipment may be adjusted to minimize the environmental impact and perhaps avoid permitting requirements completely.

People modifying or buying any types of equipment — excluding most office equipment, computers, printers, and small electronic devices — should be sure to check with their management and Dept. 10333 first before making changes or purchases.

“In the past, Sandians have not sufficiently considered the implications of some of their equipment modifications or purchases,” Terry says. “Now we are being much more proactive so that we can properly integrate these activities in a way that accomplishes our mission safely, securely, and mindfully.”

This month’s highlight is the Sandia Lab News Incentive Program 10 years ago.

Incentive Program

Richard Ormeeher (5354) and Robert Axline (5711): Methods and System Suppressing Clutter in a Gain Block, Radar-Responsive Tag System

Richard Diver (6218) and James Grossman (6211): Solar Reflection Panels

Richard Krumhansl (6118): Inorganic Ion Sorbents

Richard Diver (6118) and James Grossman (6111): Solar Reflection Panels

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Richard Ormeeher (5354) and Robert Axline (5711): Methods and System Suppressing Clutter in a Gain Block, Radar-Responsive Tag System

Richard Diver (6218) and James Grossman (6211): Solar Reflection Panels

David Teter (0243), Patrick Brady (6118), and James Grossman (6111): Inorganic Ion Sorbents

Methods and Systems for Using the Same

Sympathy

June Harrington, 72, died July 31. She is survived by daughter Elaine Chemistruck and son-in-law, Gary Chemistruck (3653). June worked at Sandia/New Mexico in Facilities Express and took part in the Separation Incentive Program 10 years ago.
'My Rewards/Benefits' to become 'HR Self-Service'

Upgrade builds on just-in-time, self-service web technology available in latest version of PeopleSoft

"My Rewards/Benefits," the familiar face to Sandians online for several years, will be changing with a new front-end called HR Self-Service (HRSS). The changeover is scheduled to begin Aug. 18 and be completed by 8 a.m. on Aug. 22. During that time, the "My Rewards/Benefits" page will be down.

But HRSS is more than a facelift. It offers employees more self-service functionality and enhancements, made possible via a major upgrade to the underlying PeopleSoft software foundation. The upgrade is being launched by HR Information Systems (HRIS). Andy Kraynik, a member of Sandia's technical staff in Multiple and Nanoscale Transport Processes Department, 1514, has been elected to a two-year term as president of the Society of Rheology. The Society of Rheology is the professional association of physicists, chemists, biologists, engineers, and mathematicians interested in advancing and applying the science of deformation and flow of matter.

Andy Kraynik

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Andy Kraynik

Andy is recognized as a leading authority on foam rheology and process engineering. After undergraduate, Andy attended Carnegie Mellon University. He went on to receive his MS and PhD in chemical engineering from the University of Minnesota.

Andy has been a member of the society since 1973 and has served as the secretary for 10 of those years and vice president for two years. He also serves as the US delegate to the International Committee on Rheology.

ANDY KRAYNIK

Andy is a recipient of the society's Distinguished Service Award, a prestigious and frequently issued distinction. Andy takes particular pride in the work he did planning and hosting the 62nd Annual Meeting of the Society of Rheology in Santa Fe in 1990.

The Society of Rheology is the first and largest society of its kind. The society boasts a membership of more than 1,600 professionals, including professionals.

"This is a field of study and research that is particularly relevant to applications at Sandia," says Andy. "Moreover, Sandia has been a strong supporter of both this area of science and this society — something that is reflected by the number of Society members who are associated with this association."

The society's greatest contributions to the scientific community, according to Andy, are the growth of the role of rheology and annual research conferences.

Andy succeeds Susan Muller of the University of California, Berkeley, as president.

Neal Shinn

Neal Shinn (1131) is the new president-elect of the AVS (American Vacuum Society) Science and Technology Society. AVS is dedicated to promoting communication among academia, government laboratories, and industry for the purpose of sharing research and development findings over a broad range of technologically relevant topics.

Neal is the user program manager of the Center for Integrated Nanotechnologies, a new national user facility operated jointly by Sandia and Los Alamos National Laboratory. He earned his BS in chemistry and mathematics from Penn State University in 1978 and a PhD in chemical physics from the Massachusetts Institute of Technology in 1983.

After earning his PhD, he performed research as a postdoctoral fellow of the National Research Council with the National Institute of Standards and Technology. In 1985, he joined Sandia as a Senior Member of the Technical Staff to lead Sandia's research and mission-related programs at the National Synchrotron Light Source (NSLS).

Neal is also an adjunct professor in the Physics Department of Utah State University and serves on external advisory committees for the College of Engineering at Penn State University, the Biomedical Engineering Department at Ohio State University, and the Physical Science Department of New Mexico State University.

Neal's 18 years of AVS service began with the AVS New Mexico Chapter Executive Committee and local symposium program committee positions. At the national level, he was program vice-chair for the AVS International Symposium in 1987. He also serves as the US representative to the International Surface Science Division of the IUVSTA (International Union to AVS), was elected division secretary (2001-2004), and subsequently was elected division chair for the 2004-07 triennium. He has published more than 85 scientific papers and edited two books. Founded in 1931, AVS promotes communication through its major annual symposium and conferences, AVS also publishes through the American Institute of Physics (AIP) the journal of Vacuum Science and Technology (JVST A and B) and Surface Science Spectra. The AVS also works to recognize scientific and technical excellence and presents awards to outstanding innovators in technical research.

Profile/Job Agent tool.

Says HR Div. 3000 VP Kim Adams: "HRSS is a great new integrated tool for employees. It offers users access to and control over virtually all aspects of their work-life experience here at Sandia, including pay, benefits, career opportuni- ties, learning and development resources, and a very user-friendly gateway to our open enroll- ment process."

Manager-specific features

The major PeopleSoft upgrade being rolled out this month offers new manager-specific capabilities specifically. It impacts fill a job (also known as "e-Recruit."

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Sandy's online recruiting/job application system for managers. The new software should increase efficiency for line man-agers, enable strategic hiring, and ensure fair and equitable hiring practices, says PeopleSoft implementation team lead Sheila Carr (4544).

Additionally, the upgrade will help in the upcoming transition from Social Security numbers to employee ID numbers and will bring the Labs in compliance with new federal applicant recordkeeping requirements.

Most of the changes will be transparent, but hiring managers will notice modifications to some features in the Get People System (GPS) module.

The upgrade will take place Aug. 18. During the upgrade changeover, users will not be able to view information in the system or update or enter new data. The new system is scheduled to be back up no later than Tuesday, Aug. 22.

To view screen shots see the PeopleSoft project website on the web:

http://www-irn.sandia.gov/hr/hrs/peoplesoft_gsps.html

For more information about the upgrade, contact PeopleSoft team lead Sheila Carr by e-mail at sacarr@sandia.gov or by visiting the PeopleSoft 8.9 project website.

Manager Promotions

New Mexico

Mary Adams from PMTS, CSU Operations Department, 4343, toARSER, Information Systems and Middleville Services Dept. 4528.

Mary joined Sandia in 1983 and rehired in 1998 following an educational leave. She has worked in the area of application development and desktop computing in the Integrated Information Community and Environment (IIC/E). She worked on nuclear weapons engineering applications in the mid 1990s and has worked with a BS in physics and an MS in physics across the nuclear weapons complex to support interate computing. She also served as the acting manager of the Technical Library from August 2004 through November 2005. Her latest assignment was as a project manager in the computer support units.

Mary has a two-year degree in management information systems and a BS in psychology with a minor in biology from the University of New Mexico Honors Program. She will continue to work in information protection and security from the University of New Haven in 2007.
Avoid frustration by understanding ‘phone tree’ structure
UnitedHealthcare and CIGNA phone trees deliver callers to appropriate resources

Welcome to United Healthcare for Sandia National Laboratories. To ensure service quality, we may record this call.

UHC — 1-877-835-9855

1. "Medical" or press 1. "Mental Health" or press 2. "Pharmacy" or press 3. (for those listed in the EDP), otherwise contact Pharmaca. "Health Adviser" or press 4. Press 5 for a representative

"Covered" Benefits & Eligibility

Now, what type of claim are you making? You can say: "Medical" or press 1. "Mental Health" or press 2. "Pharmacy" or press 3. "Health Adviser" or press 4. Press 5 for a representative

"Find a Doctor" List of Health Care Professionals or Hospitals

Now, what kind of doctor are you looking for? You can say: "Primary Care" or press 1. "Specialist" or press 2. "Health Adviser" or press 3. Press 4 for a representative

"Health Resources" Ask specific questions.

The system will help you find the location and any required paperwork. Callers can also reach the same 1-800 number for any questions. Your ID card handy? Say "YES" or "NO?"

The diagram here is designed to help UHC members access services and resources within a complex "phone tree." The UHC Sandia line is 1-877-835-9855. By understanding the logic behind the phone tree structure and following the tree guidelines, members should experience less frustration and confusion.

Important: Do NOT press "0" at the beginning of your call to try to reach a live person. By doing this, your call will be sent to a generic, non-Sandia call center. Once you reach the Main Menu, you will be able to press "0" within one of the five categories (Claims, Coverage, Find a Doctor, Health Resources, or Care Coordination).

CIGNA — 1-800-244-6224

This phone tree shows where your responses will lead you when calling CIGNA HealthCare at 1-800-244-6224. The tree shows services available when a CIGNA In-Network or CIGNA Premier PPO member calls concerning eligibility, claims, or other benefits. For simplicity, the complete dialog is not included. Please refer to the notes below for more information. If this phone tree does not meet your needs, you may ask for an associate at any time after entering your Member ID information.

The diagram below is designed to help CIGNA members access services and resources within a complex "phone tree." The CIGNA line is 1-800-244-6224. By understanding the logic behind the phone tree structure and following the tree guidelines, members should experience less frustration and confusion.

Important: Do NOT press "0" at the beginning of your call to try to reach a live person. By doing this, your call will be sent to a generic, non-CIGNA call center. Once you reach the Main Menu, you will be able to press "0" within one of the five categories (Claims, Coverage, Find a Doctor, Health Resources, or Care Coordination).

Notes:
- Member ID Entry is member’s ID number and date of birth.
- Products (Dental and CIGNA Choice Fund) are Sandia products and not shown on this diagram.
- Response to System Question.
- Customer Service Representative (CSR).
- Member Identification (ID) Card.
- Self Service
- Service Center
- CSA
- 24-Hr Health Fds Line...
Big Brothers Big Sisters gearing up for school year

200 kids are on waiting list for an adult friend and role model

By Iris Abyotes

Some of us may have big brothers and big sisters; some of us have little brothers and little sisters. That type of relationship is what Big Brothers Big Sisters of Central New Mexico wants for children so that they can reach their potential.

According to Public/Private Ventures, an independent research firm, children who meet regularly with their Big Brother or Big Sister are 27 percent less likely to begin using alcohol, 33 percent less likely to engage in violent behavior, 46 percent less likely to begin using illegal drugs, 52 percent less likely to skip school, and 37 percent less likely to drop out of school. Big Brothers Big Sisters has a variety of programs for children between the ages of 6 and 15. A Big Brothers Big Sisters staff member helps with each “match” by introducing a volunteer to his or her Little Brother or Sister. Couple matches are also available.

Sandia Back to School volunteer opportunities

A280 time is available for Sandia employees, retirees and contractors who are welcome to volunteer too but are not eligible for A280

CroSSLinks — Volunteers share their love of science in local elementary school classrooms using provided inquiry-based science kits. Frequency is negotiated between volunteer and teacher. Amy Tapia, 284-5207, astapia@sandia.gov.

Valle Vista Math Tutors — Volunteers tutor fourth and fifth graders once a week for one hour at Valle Vista Elementary School. Training and materials are provided. Norb Tencza, 284-5450, nftencza@sandia.gov.

Amy Biehl Math Tutors — Volunteers tutor 2-3 high school students every Monday from 4-5 p.m. in algebra, pre-calculus, and trigonometry at Amy Biehl High School. Math is taught using an interactive math program where students “discover” math concepts from real-world situations. Wendy Acker, aucker@msn.com.

Junior Achievement — Volunteers teach K-8 business concepts to local elementary and middle school students using a prepared curriculum. Most units include five 30-minute sessions and all materials/instructions are included. Junior Achievement, 346-0861, office@newmexicoja.org.

Mentoring — Big Brothers Big Sisters and Wise Men and Women: Volunteers meet once a week for one hour with a child during the school day for an hour each week at school. George Wagner (6441) has two Little Brothers: Cody, who just completed fifth grade, and Jonathan, a second grader. He has been mentoring Cody and Jonathan’s Big Brother for two years. George’s experience with Big Brothers Big Sisters began in 1977. A television ad motivated him to volunteer. “I was really impressed by the Big Brothers organization,” says George. With his children all grown, George decided to do it again. He participates in the on-site program at Sandia Base Elementary where his Little Brother attends school. He meets with them twice a week either at lunch or later in the afternoon for an hour. Half of the time is devoted to schoolwork and the other half is social.

Big Brothers Big Sisters seeks mentors who want to make an impact on a child’s life. About 200 children are on a waiting list. “These are children who could really use a caring adult in their lives,” says Rose Garland, Big Brothers Big Sisters’ partnership manager. Rose also expresses her appreciation of Sandia volunteers. Sandia is the third-largest volunteer partner in the area, with more than 20 Bigs participating each year.

Jason Cook (6863) has a friend who is a Big Sister and told him about the program. He thought it sounded great and like something he wanted to do for the community.

He became a mentor in the Crossroads program. It offers several group activities that Bigs and Littles can choose from. His Little Brother is Andres, 12. They have toured the fire academy and the base, checking out the planes. “We hang out and play computer games,” says Jason. “I enjoy sharing my experiences with a young person. I like to think I am making a difference in a child’s life.”

The most rewarding part of being with my Little Brothers is a smile or a unique statement that comes out of nowhere,” says George. “It makes me think and smile.”

For information on Big Brothers Big Sisters visit www.bbbcs-cnm.org.