

New Research Device Makes Nearby Computers Act As If They Were Thousands of Miles Apart

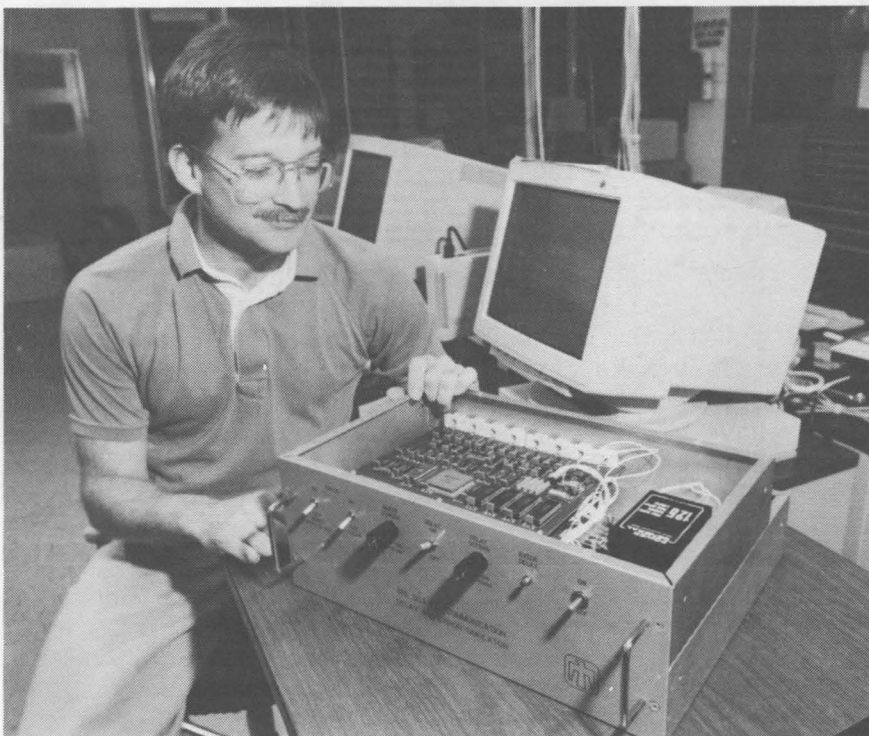
When people talk across long distances on a satellite circuit, they may notice a pause between each exchange because of the time it takes the signal to get from one telephone to the other. The same is true in computer communication, says Lyndon Pierson of Networking Dept. 1934. And just like people, he says, "Computers deal with long delays by slowing down, speaking clearly, and waiting for acknowledgment from the other end of the line."

To help developers test ideas for improving computer communication, Lyndon and Tom Pratt (1934) have designed an instrument to mimic the

Just like people, computers deal with long delays by slowing down, speaking clearly, and waiting.

time delays and error rates that occur when high volumes of data flow between computers thousands of miles apart. It's called the DS3 Telecommunication Delay and Error Simulator (DS3 is the signal standard for long-haul, high-speed computer communications).

This system makes it possible to connect two nearby computers and have them behave as if



DELAYS AND ERRORS are intentional in this new Sandia hardware: It's a device that simulates the effects that thousands of miles of distance can have on computer communications. Seen here is one of the developers, Tom Pratt (1934); the other is Lyndon Pierson (1934). The simulator helps researchers improve data transmission.

they were connected by a fiber-optic link up to 5,000 miles long. "The beauty of this system," says Lyndon, "is that it effectively replicates long-distance transmissions and makes it possible

for researchers to better understand how high-speed, high-delay, high-error-rate communication works. They can try out new ideas for improving data transmission without having to lease costly long-distance communication circuits."

Helps Unkink Communication

"This device itself doesn't solve the problem of transmission errors," says Tom, "but it enables researchers to conduct experiments that will eventually solve the problem. For example, we're now hot on the trail of developing new devices for analyzing the throughput of communication channels and figuring out where bottlenecks occur."

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LAB NEWS

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AI to Discuss New Directions for Labs

'Town Meetings' Scheduled Aug. 18, 19, 21

Labs President Al Narath will present Sandia's strategic intent — titled "Exceptional Service in the National Interest" — to employees in Livermore Aug. 18 and to employees in Albuquerque Aug. 19 and 21.

The formal statement of purpose will include information about the Labs' future mission and mission focuses. Al will also discuss new directions for the Labs, such as new cross-cutting R&D programs in the areas of transportation, space, health/biomedical technologies, non-proliferation, and manufacturing. Each of these areas will require expertise from a variety of organizations at the Labs, says Shanna Lindeman, Executive Assistant to the President.

To help coordinate these cross-cutting initiatives, the Sandia Program Council recently appointed Labs-wide "sector leaders" for each of the focus areas. Dan Hartley, VP for Energy and Environment 6000, will lead R&D efforts in transportation; Gerry Yonas, VP for Systems Applications 9000, will lead R&D efforts in both space and health/biomedical technologies; and Roger Hagengruber, VP for Defense Programs 5000, will lead R&D efforts in non-proliferation technologies. Heinz Schmitt, VP for Component Development and Engineering Support 2000, was previously appointed to coordinate Sandia's advanced manufacturing technology initiative.

"We hope the 'Town Meetings' will explain how the Labs can contribute to future national

needs and show how we plan to serve these needs," says Shanna.

First Sessions at Livermore

Employee dialogue sessions begin at Sandia, Livermore on Aug. 18 in the Bldg. 904 auditorium. Employees with last names beginning A through L should attend the 8:30 a.m. session; employees with last names beginning M through Z should attend the 10 a.m. session.

Al will address employees at Sandia, Albuquerque in the Technology Transfer Center (Bldg. 825) on Aug. 19 and 21. Employees should attend sessions at the times listed below:

Date, Time	Organizations
Aug. 19, 8:30 a.m.	1 through 600, 6000
Aug. 19, 10 a.m.	1000 through 1900, 2800
Aug. 19, 1 p.m.	2000 through 2700
Aug. 21, 8:30 a.m.	5000 through 5900 and 7000 through 7300
Aug. 21, 10 a.m.	7400 through 7900
Aug. 21, 1 p.m.	4000 through 4500 and 9000 through 9900

Several VPs are planning to address employees following this year's Fall Leadership Conference, which takes place the week of Sept. 14. These VP meetings, to be held Sept. 28 and 29 in Albuquerque and Sept. 30 in Livermore, will include information about how each sector plans to carry out the Labs' new strategic intent. •JG

Employee Teams Tackle 'Biggies'

About Time for Labs' Routine Check-Up, Say Survey People

For the first time last summer, Labs management checked Sandia's corporate pulse using an all-employee opinion survey. Now, according to Mary Nation (4302), project manager for Sandians' Perspectives follow-up activities, it's about time for the Labs to get another routine check-up.

"The Sandians' Perspectives survey was the first-ever self-assessment of the Labs' culture," she says. "Hundreds of employees and managers are now working to address problems identified by employees in that first survey. But Sandia has come full-circle in its ongoing cycle of cultural self-assessment, and it's time to start planning a second survey."

The first survey cycle began in late 1990 when Sandia's management decided to ask employees what they thought of various workplace issues. The survey was so successful in identifying problem areas and creating a permanent record of progress

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Newly Appointed Sandia 'Ombuds' Are on the Job — See Page Six

This & That

A Solution? - Several issues ago, I was lamenting the fact that there is more news this summer than we can fit into our standard-size issues. The always-helpful Gary Shepherd (7327) suggested that we print the LAB NEWS in two-point type. Desktop publishing makes some things easy that weren't several years ago, even printing two-point type. So I decided to see what it would look like. Here's a sample: the first two items from last issue's This & That column:

On Old-Time News-Typists - The only thing changing faster than the world was three days to computer software. To appreciate our page layout program just before starting this issue, and to hope all goes well during the transition. In this new version, we can even still photos and columns of text if we want to, but we're trying to resist the temptation to do "visual" journalism.

Handling of Summer Letters - In its of journalistic attitude, or do the annuals for computer programs get thicker while their budgets make them harder to use? A few years back, the annual for a popular word-processing package came in a laminated binder that mostly stayed open on my desk. A later version of the program had a standard manual, not quite so nice but at least well-behaved in staying at the right page. Now the program features a character and grammar checker, but the manual's binding is good and it always flips over to some other page than I'm trying to consult it, and ends at the computer at the same time.

A tad difficult to read, Gary, but thanks for the idea.

* * *

Dealing Cards - Are you aware that special change-of-address cards are available for Sandians? They make it very easy to give our new organization names and numbers to correspondents and publishers. If your secretary doesn't already have a supply, you should ask her/him to order some. In Albuquerque, the cards are available from the Just-In-Time service as form SA 7150-C. In Livermore, Sandians should request form 8524-2A from the Mail Distribution Team office.

* * *

Only Halfway There - Summer employee Richard Thatcher (333) says he isn't completely forgetful yet - so far he only has "Halfheimers" disease. Richard, papa to our LAB NEWS summer helper, Dawn Thatcher, is a mid-school teacher in Truth or Consequences during season.

* * *

What's Your Excuse? - Speaking of forgetfulness, a nice lady called last week to say she sent in an "unclassified" ad, but forgot to include her phone number. She didn't identify herself right away, but sensing that the call was from an older person not at Sandia, I asked, "Are you a retiree?" "Yes," she replied, "that's why I forgot!"

* * *

Maybe It Needs Fertilizer - Overheard while I was walking past a Kirtland AFB building where the sprinklers weren't aimed quite right and were giving a liberal dose of water to the sidewalk: "You know, they've been watering that sidewalk for weeks, and it hasn't grown an inch."

* * *

Buzzword Champions? - Am I wrong, or is Sandia among the best (worst) groups at adopting and overusing every new buzzword that comes down the pike? Not long ago, we were "socializing" every issue around here. Now, we are "championing" every cause. Spare me, please!

* * *

Recycle the LAB NEWS - Unless you file the LAB NEWS or take it home after you finish reading it, toss it in the recyclable paper box along with used white office paper. When you do, you'll be recycling the recycled because the LAB NEWS is printed on partially recycled paper.

* * *

Late Calls Are the Pitts - I'm beginning to wonder if my director, Herb Pitts (7100), trusts me. I'm now getting calls from him fairly regularly about 4:29 p.m. Not long ago, he even came right out and said, "I just wondered if you were still there." I'm not sure he was convinced, but I replied, "Yup, I just finished lunch at my desk and am starting on the afternoon's work. Could you call Sandia Security and get permission for me to work in here until about 11 tonight?" I think Herbert may be developing a breathing problem, because all I heard after that was prolonged wheezing. ●LP

In Response to Employee Input

New Process Allows Easier Movement Into MLS Ranks

Right before our copy deadline, the LAB NEWS learned that a new Sandia policy will soon go into effect, making it much easier for employees to move into the MLS (Member of Laboratory Staff) ranks. We will follow up with more information in the next issue. In the meantime, here are the basics of the new policy:

(1) A non-degreed MA IV, MA V, STA, TA, Team Supervisor, Executive Secretary, or Nurse with five years professional experience is eligible to bid on MLS postings.

(2) Any employee, regardless of classification, with a relevant bachelor's degree or master's degree is eligible to bid on MLS postings.

(3) The MLS level (2 or 3) will be determined by education and experience:

Non-degreed employees with five years of Sandia experience in one or more of the job categories in item (1) above will start at level 2.

Employees with relevant bachelor's degree and no experience will start at level 2.

Employees with a relevant bachelor's degree and five years of Sandia experience in one or more of the job categories in item (1) above will start at level 3.

Employees with a relevant master's degree will start at level 3.

(4) Employees will be required to remain at the designated level for two years before advancing to the next, and must be performing at an acceptable level.

(5) Employees may bid on lateral moves after being in the classification for one year (for example, level 2 bidding on another level 2 opening). ●

Volunteers Needed For Day of Caring



Albuquerque-area Sandians can join hundreds of other area citizens in the United Way of Greater Albuquerque Day of Caring Tuesday, Sept. 1. This first-time effort will mobilize hundreds of volunteers to perform community service tasks for that one day for non-profit agencies in Bernalillo, Sandoval, Torrance, and Valencia counties. Day of Caring kicks off the 1992 United Way fund-raising campaign.

Teams of employees from organizations throughout Albuquerque and nearby communities are being recruited to participate in volunteer efforts such as children's activities, painting walls and murals, delivering meals to senior citizens, yardwork and gardening, and arts and crafts.

Volunteers may designate particular organizations or types of groups they prefer to work with and the kinds of work they prefer. Day of Caring will give participants a first-hand look at many of the services non-profit agencies provide. Several Sandia volunteers have already committed to serve as classroom aides at La Mesa Community Day Care and Preschool. Six more volunteers are needed to read to children, help them with projects, and eat lunch with them (lunch provided).

Two volunteers are needed to deliver meals to homebound people in the Meals on Wheels Program. This would involve working through the middle part of the day, delivering from one of the seven area hospitals participating in the program. Numerous other projects also need volunteers.

If you are interested in volunteering for the Day of Caring, please call Al Stotts (7161) on 4-2282.



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Take Note

"Decision to Drop the Bombs," an exhibit about the decision to drop the nuclear bomb on Hiroshima on Aug. 6, 1945, opened yesterday at the National Atomic Museum. The exhibit includes artifacts from the Manhattan Project and World War II, including battle flags, military tunics, items from Hiroshima and Nagasaki, and photos. The exhibit continues through October.

* * *

UNM is again offering the course "Entrepreneurial Engineering" (ME 456) this fall semester. Working engineers and graduate and senior engineering students take the course. The class works in teams, usually planning four new businesses. Engineers who are considering starting a business someday are encouraged to take the class and discuss ideas they may have for businesses. The class meets at UNM on Tuesdays, beginning Aug. 25, from 6:30 to 9:30 p.m. Enrollment must be completed in the Student Services Building Registration Center (277-5548) by the following Friday. The cost for in-state residents is \$207 for the three-unit class. For more information, call Prof. Bill Gross on 277-6297.

Saving a Drowning Swimmer**Sandia Hosts Inner-City Math Teachers**

It's fairly easy to see how math applies to the physics of falling objects. But how about using math to understand secret codes or determine the quickest path to a drowning swimmer?

Recently, nine inner-city middle school teachers from across the country gathered at the Labs' Center for Computational Engineering (CCE) at Sandia, Livermore to explore some interesting new ways to help their students understand math. Along with scientists, engineers, and education researchers, their purpose was to develop new mathematics curricula based on "hands-on" teaching methods.

"Many students do not understand the relevancy of math in their everyday lives, so they lose interest early," says Bill Wilson of Program Development Dept. 8105.

The summer institute — part of the CCE's Middle School Mathematics Through Applications project — was coordinated by Bill and Mike Pendley of Scientific Computing Dept. 8117, along with the Institute for Research on Learning (IRL) in Palo Alto and the Stanford University School of Education. The five-week workshop began July 6 through 24 at Sandia and continued July 27 through Aug. 7 at the IRL.

Dribble Perfectly, Then Shoot

While at Sandia, the teachers developed specific teaching modules to bring to the classroom, each using hands-on applications to teach mathematical principles.

"Our idea is to engage teachers in developing a way of understanding mathematics — both for teachers and their students — that treats mathematics as a tool for solving problems, rather than how it is understood now," says Jim Greene of IRL.

"Right now, we force kids to learn long division perfectly before we dare teach them algebra," says Bill. "It's like a basketball coach forcing players to dribble perfectly before allowing them to take a shot."

As part of the workshop, Mike helped the teachers build a working laser demonstration that illustrates the principles of modulation. They first glued a mirror to a speaker that was attached to a small radio. They then used the mirror to modulate laser light, bouncing the light off several mirrors and back into a demodulating device, which trans-



INNER-CITY teachers participating in a summer institute at Sandia, Livermore construct a laser board that demonstrates the principles of sound modulation using laser light. The classroom experiment was designed by Mike Pendley (left, 8117). Teachers are (from left) Sam Guydon of Miami; Helen Hoffman of Phoenix; Nancy Montgomery of Hayward, Calif.; and Rob Wigand of San Lorenzo, Calif.

fers the signal back to the speaker that produces the sound. The experiment shows how scientists predict and simulate modulation of a communications signal.

The teachers attended lectures about using mathematical solutions to solve real-world problems. They also learned software skills taught on various hardware systems, and one teacher showed how the principles of computer simulation and programming could be taught in the classroom using a hand-held calculator. Exercises such as these, says Bill, show how students can be taught to use computers as problem-solving tools.

Nancy Montgomery, a math teacher at King Intermediate School in Hayward, Calif., says her curricula this year will include projects showing how math applies to secret codes, the drowning swimmer problem, and falling objects. "I plan to show the kids how we set up a problem and let them figure out what mathematical tools they need to find the solution," she says. "The role of the teacher must be changed from lecturer to coach or guide."

In addition to the workshops and lectures, the teachers got a first-hand glimpse of Sandia facilities such as the Central Computing facility, electron microscope facilities, the Printed Circuit Laboratory, and the Combustion Research Facility.

Bill says the teachers are invited to use their

Sandia contacts as resources during the school year.

Willing and Able Sandians

The goal of the Middle School Mathematics Through Applications project is to make mathematics more accessible to 6th through 9th graders, especially minority and women students. The project is funded by the National Science Foundation, several private companies, and DOE's Office of Energy Research.

"It's nice to see Sandia opening up its expertise to teachers," says Ray McDermott, an anthropologist and professor of education at Stanford University. "This program not only gives teachers a lot of math exposure at a high level, it also opens up the opportunity for Sandia to bring its wealth of knowledge to bear on some social issues in the country."

"I had no idea there were so many available resources at Sandia," says Robert Wigand, an 8th grade science teacher at Arroyo High School in San Lorenzo, Calif. "The Sandia staff is supportive of education and is willing to help us out."

•KGordon (8535)/JG

**SANDIA
LIVERMORE NEWS**



A "BREAKFAST OF CHAMPIONS" was held recently at Sandia, Livermore to recognize people who helped during the first year of the waste minimization and pollution prevention program. VP John Crawford (8000, right) is seen presenting a certificate of appreciation to Murray Lindsay (contractor) for his efforts. Some 50 people were recognized for participating in paper and aluminum-can recycling, as well as Earth Day activities, all coordinated by Alice Johnson-Duarte (8642).



SUMMER STUDENTS and faculty working at Sandia, Livermore were introduced to Sandia management during a get-acquainted luncheon last month. Special Programs coordinator Brenda McFarland (8522), seen here addressing the gathering, organized the event. Sandia President Al Narath and Livermore Programs VP John Crawford were among the managers attending. The 50-some summer employees also had the opportunity to visit with eight Livermore center directors who attended.



(Continued from Page One)

Survey Check-Up

that it will now become a routine tool for self-assessment. The next survey is scheduled for next spring.

Also known as the Stanek survey, the first Sandians' Perspectives survey asked employees to provide their candid opinions about various workplace issues. More than 4,600 Labs employees completed and returned the questionnaire last summer.

Labs-wide results were tabulated, and findings were presented to employees in November. Among them: Sandians are generally happy about their jobs but are concerned about several key management issues.

The four most prominent of these concerns were communication, management practices, the performance appraisal process, and job security. In November, the Sandians' Perspectives Cabinet — originally formed to monitor the survey's adminis-

Four prominent concerns: communication, management practices, performance appraisal, and job security.

tration — began to address these issues at the Labs-wide level. The cabinet is made up of managerial employees representing a cross-section of the Labs.

"We decided to focus our resources on the four 'biggies,'" says Mary. "These were the issues employees said they were most concerned about."

'State of the Organization' Addresses

Jerry Allen (6901), chairperson of the Sandians' Perspectives Cabinet, says four process management teams (PMTs) have been formed from the cabinet to address each of the four key concerns. These teams are spending a lot of time ferreting out the root causes of each of the concerns and recommending Labs-wide actions, he says.

The management PMT, for example, headed by Dan Hartley (6000), will recommend to the

Sandia Management Council that all vice presidents hold annual "State of the Organization" briefings for employees. During these briefings, employees would hear how their departments fit into their vice president's business plans for the coming year. Center directors would hold similar briefings.

"This would improve communication and give meaning to each employee's job by showing employees how their organizations fit into Sandia's future," says Jerry. Additional management training is also a part of that PMT's recommendation, he says.

The communication PMT, headed by Larry Bertholf (4400), has found manager credibility to be a key problem in manager-employee communications at the Labs. The group will organize several leadership and team-building workshops for managers to deal with trust issues, taught by a renowned communication consultant and author.

In addition, the group is encouraging the formation of several new Labs-wide councils such as the Corporate Communicators Council and the Public Relations Council. These groups are expected to improve communication across organizational lines.

Ralph Bonner (7500), leader of the performance appraisal PMT, says the Sandians' Perspectives survey confirmed suspicions that many employees were dissatisfied with the existing performance appraisal process. The survey also helped pinpoint some key concerns about the process, he says.

In response to the survey, Ralph's team is implementing a new performance management system that will result in employees and managers agreeing upon a set of goals and objectives for each employee to fulfill during the upcoming year. Directors and above will pilot the process during the next year, he says.

Although Sandians are accustomed to having relatively secure and rewarding jobs at the Labs, Ruth David (2700), head of the job security PMT, says a changing international climate and the recent announcement that AT&T will not renew its operating contract have intensified concern among employees about job security.

In response to these concerns, the group has

helped develop a new "psychological contract" between Sandia and its employees, which takes into account the uncertainty of the times and the Labs' changing corporate culture. The new culture, she says, relies on all employees to contribute to and take responsibility for Sandia's success. In

"Sandia's management is taking the Sandians' Perspectives survey very seriously."

addition, the group recommends that Labs management articulate business plans to employees.

"Sandia's management is taking the Sandians' Perspectives survey very seriously," says Jerry. "It's important for employees to know that something's being done about their concerns."

More Than 150 Employee Teams

In addition, survey responses were tabulated for individual organizations. Coordinators for each directorate were trained to help address problems identified at the organizational level. Collectively, these coordinators have set up more than 150 quality action teams (QATs) to act on the problems identified by employees in each organization, Mary says.

"The role of the Sandians' Perspectives Cabinet is to look at the big picture, to take corrective action at the Labs-wide level," she says. "But the Quality Action Teams create a forum in which individual employees and managers work together to solve their common problems." In general, she says, the survey showed that employees were concerned about the same issues both at the Labs-wide and organizational levels.

Mary says the results of the next Sandians' Perspectives survey may not accurately reflect the progress that has been made as a result of the first survey. "We may see some employee morale problems as the AT&T contract comes to a close," she says. "Employees will naturally experience some uneasiness as we go from a known to an unknown. But a lot of changes may take place at the Labs before then, so it's difficult to predict what employee concerns will be." ●JG

(Continued from Page One)

Error Simulator

The system will be used to hone the performance of a network linking the Labs' supercomputers in Livermore and Albuquerque.

Seven Times Faster

Though delay- and error-simulation technology is available elsewhere, it can't convey data nearly as fast. Sandia's system operates at a rate of 44.73 megabits per second, seven times as fast as the 6.3 megabits per second achieved by the next fastest system. (A bit is a representation of a 1 or 0 as used in digital communication and computing; a megabit is a million bits. Roughly speaking, the

Simulator Puts 1991 R&D 100 Winner Through Its Paces

The new delay and error simulator is a natural for testing hardware developed at Sandia last year to prevent encoded information from being lost through improper synchronization of sending and receiving computers. Encoding is used to protect confidential information — for example, in matters pertaining to bank transfers or national security. Sandia received an R&D 100 award for the cryptographic synchronization loss detector. Lyndon Pierson, Tom Pratt, and Joseph Maestas (all 1934) were the developers of that device.

Sandia system is fast enough to transmit the text in several dozen copies of the LAB NEWS every second.)

It's also more compact than other simulators, and it costs less than half as much as existing devices that require two separate units to provide delay and error characteristics.

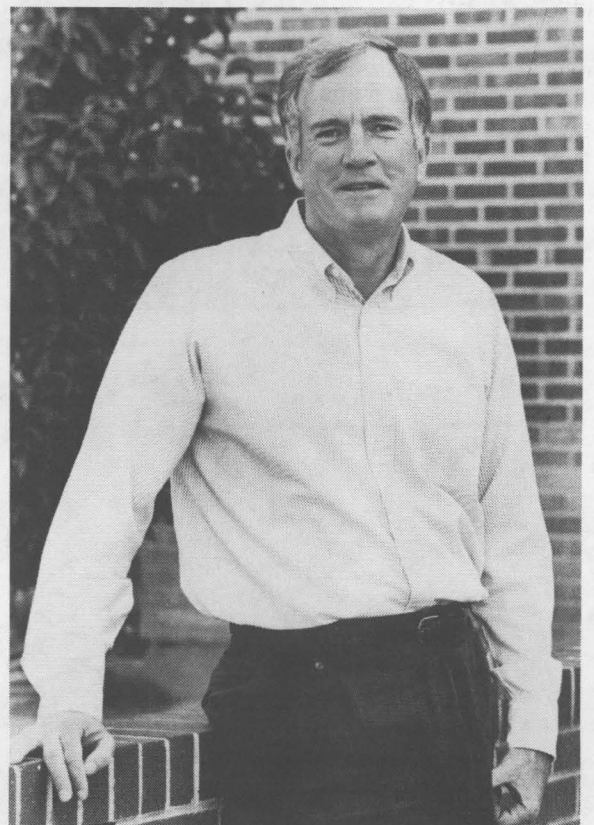
Delays in long-distance computer communication result in a backlog of information still waiting

"You're talking about millions of bytes of data that are in mid-air, so to speak."

to be sent. In addition, the larger the quantity of data and the longer the distance, the greater the likelihood of errors during transmission because of such problems as electrical noise, lightning strikes, or weak signals. "You're talking about millions of bytes of data that are in mid-air, so to speak," says Lyndon as he explains the vulnerability of long-distance signals.

Much of the hardware for the delay and error simulator, such as the layout of the printed circuit wiring board, was developed with Sandia's computer-aided-engineering equipment, which lowered costs and helped keep development time to about six months, says Tom. He acknowledges the assistance of Sandra Spraggins (9202) and Rich Hunt (9215) in making that equipment available.

Sandia is now preparing to begin negotiations to transfer the technology of the simulator to commercial manufacturers. ●LDoran(4526)



NEW ASME FELLOW — Charles Hickox Jr. of Computational Fluid Dynamics Dept. 1511 was recently elected a fellow of the American Society of Mechanical Engineers (ASME). Charles, a Sandian since 1975, was selected for his contributions in fluid and thermal sciences. His research includes structural and thermal studies for boiling-water reactors as well as work in hydrodynamic stability theory and liquid atomization.

feed **feedback**

Q: Why was the "Spirit of Sandia" calendar created and then killed?

A: We created the calendar because employees say (in the Sandians' Perspective Survey, for example) that they want to see more about how we are integrating corporate strategic initiatives (Quality, Project Management, ES&H, Chairman's Quality Award, etc.). They also want to know more about what's happening at the Labs.

In a brief message each month, we tried to show that our major initiatives were being integrated under the "quality umbrella." And we tried to provide an easily accessible reference to events and happenings at the Labs.

We felt our messages were important to employees — our customers — and to the future of the Labs, and, further, that a calendar was a handy and innovative way to keep employees informed about what's happening each month.

So why was the calendar killed? Customer feedback is an important principle in our Quality Improvement and Primary Standards Center. So in May we surveyed our customers to measure the effectiveness of the "Spirit of Sandia" calendar.

We distributed 419 surveys to a cross-section of management, nonrepresented, and represented employees. Twenty-six percent of the surveys were returned.

Approximately a third of the respondents found the calendar to be useful; however, most of the respondents did not use the calendar, and 51 percent favored discontinuing it. So, practicing what we preach about customer satisfaction, we did.

We thank those who responded to the survey and apologize to those who found the calendar useful.

Perhaps in the future, the calendar could be revived in some other format, like electronic mail, but for now it's dead.

Charles Tapp (4300)

Q: Wouldn't it be more efficient and accurate, and use less paper, if the base decal counter provided a character cell terminal to look up decal numbers, rather than a four-inch-high printout? A terminal shouldn't take up much room, either. To carry the idea one step further, why can't pbx access be provided to those who have it, to request decals electronically, similar to library requests and JIT orders?

A: We have been discussing ways employees can use the magnetically encoded stripe on their badges to request decal information. However, we have not yet been able to overcome the computer security and information concerns. Also, we are currently involved in other high-priority tasks using the Badge Office Access and Control Computer System (ACS). The second part of your query is an interesting concept and will be brought to the attention of the ACS project team for analysis.

Jim Martin (7400)

Q: I recently read an article in Popular Science on the use of extremely sophisticated computers in efforts to design AIDS virus molecule blockers. Can Sandia's massively parallel hypercube and other computers help with this type of problem? It could help society as well as generate money.

A: Yes. Sandia has several efforts involving the modeling of large organic systems using massively parallel computers. Two of these efforts relate to designing anti-cancer drugs: Two efforts are aimed at developing better catalysts used to produce hundreds of billions of dollars worth of product each year.

Sandia's work on modeling the anti-cancer drug cyclophosphamide and on modeling the enzyme catalyst dihydrofolate reductase were featured in the publication "Grand Challenges

1993: High Performance Computing and Communications," prepared by the Federal Coordinating Council for Science Engineering and Technology. We are trying to expand activities in these areas because of the enormous potential for designing materials and molecules by computer.

Ed Barsis (1400)

Q: Surely something can be done at the two intersections south of Area 1 — Ninth and O Street, and Fourteenth and O Street — to improve traffic flow during all parts of the day, especially at starting and quitting time.

A: There are long-range plans for O Street improvements that include the installation of new signal lights at the intersections of O and Fourteenth, and O and Ninth. The installation of these traffic lights, along with the widening of O Street, should improve traffic flows and reduce traffic backups, especially during the morning and evening rush hours. However, funding for the proposed O Street improvements is probably several years away.

Meanwhile, the two intersections have existing four-way-stop signs.

The current traffic situations have been studied by the Kirtland AFB Traffic Engineering Department and the Sandia Traffic Committee, and observations indicate that inconvenience to drivers occurs for approximately 20 minutes during the rush hours. Problems between 8:15 a.m. and 4:15 p.m. have been rare and usually caused by driver errors. Facilities will continue to work with KAFB on site improvements.

Neil Hartwigsen (7900)

Joe Archuleta (7104)



PRESIDENT-ELECT — Ron Iman (6613) was recently elected to serve as President for the American Statistical Association (ASA), one of the world's leading statistical organizations with more than 17,000 members, for 1994. Ron has served on the ASA Board of Directors for seven years, including four years as Treasurer and six years on the Board's Executive Committee. Ron, a Sandian since 1975, was project leader for Sandia's first CRADA with Motorola and Los Alamos National Laboratory. His work includes development of uncertainty and sensitivity analysis techniques for use with computer models in risk assessment applications.

New Book Gets Rave Reviews

Manual Helps Sandians Understand Badge Office Requirements

Ever been frustrated trying to decipher all the security requirements necessary for bringing an uncleared visitor to the Labs? Well, the people in Sandia's Badge Office understand, and they believe they've developed a solution.

During the last several months, employees in Personnel Security/Visitor Control Dept. 7437 have compiled a comprehensive manual for working with the Badge Office, titled *Badge Office Guidelines*. They hope the manual helps open the lines of communication at the Labs regarding visitor access and routine security requirements.

The document is organized so that it's easy to use, even for the first-time or occasional user, says Merikay Hampton (7437-1), who prepared the document for publication along with Mabel Hurley of Technical Publications Dept. 7151. The pages of the manual are loose-leaf, so the manual can be updated routinely to reflect changes in security requirements and visitor access forms.

Merikay says as she compiled the 45-page document, she drew on her 10 years experience as a Sandia secretary. "I hope this manual becomes standard reference material on every secretary's desk," she says. Nearly 600 copies of the manual have been distributed to secretaries across the Labs, and more are being printed. (Other employees who need a copy may call Merikay on 4-2007.)

Busy Badge People

Ray Chavez, Team Supervisor of Personnel Security/Visitor Control Org. 7437-1, says a recent informal study showed that Badge Office employees field approximately 150,000 inquiries

a year, nearly 1,000 interactions per employee per month. He expects the new manual to contribute significantly to the office's efficiency.

"This manual should help secretaries and other Sandians understand ever-changing security requirements as well as eliminate a lot of routine phone calls to the Badge Office," he says.

So far, the manual has received "thumbs up" from secretaries. "It's a terrific guide for current and new secretaries," says Sue Stone, Staff Secretary for Laboratory Information Systems Center 7300. "Rather than calling half a dozen people for information, secretaries now have the information they need right in front of them."

Ray says that the Badge Office has also started briefing new secretaries about security and visitor access requirements during secretarial training classes. A new monthly series of brown-bag sessions will also help inform secretaries about Badge Office procedures, he says (see box). ●JG

Brown Bagging with The Badge Office

Sandia secretaries are invited to attend a new series of informational lunch meetings with Badge Office employees to discuss and ask questions about visitor access and security procedures. The first brown-bag session is scheduled for Monday, Aug. 17, from noon to 1 p.m. Bring a lunch and your questions to the conference room directly across the hall from the Badge Office (Bldg. 801). For reservations and more information, call Merikay Hampton (7437-1) on 4-2007.

Both Experienced in Counseling

Ombuds Look Forward to Helping Sandians As Offices Open in Albuquerque, Livermore

Sandia's two new ombuds hung out their shingles this past Monday — when their positions became official — but helping their colleagues solve problems isn't new for either of them.

Filling the new positions are Wendell Jones, former Manager of Mechanical and Corrosion Metallurgy Dept. 1832 in Albuquerque, and Michael Birnbaum, former Manager of Structural Mechanics Dept. 8742 in Livermore. They now make up Org. 11.

Both have worked informally for years at helping co-workers grapple with personal problems. Both were delighted when Sandia announced plans to launch an ombuds program, and even happier when they were picked to fill the first positions.

"I'm excited. Everyone deserves to be listened to and appreciated, and that's something I get to do full-time now," says Wendell.

Mike echoes that, saying, "I look forward most to being able to help people so they can find solutions to their problems. That's what I'm here to do."

Ombuds Discussions Confidential

Discussions with either ombuds will be confidential, and they welcome any Sandian to talk about any problem. Examples, Wendell says, are employee-manager difficulties, communications impasses, perceived lack of work appreciation — anything that consumes mental or physical energy and affects a person's work, whether its genesis is work- or personal-based.

Both were selected through a rigorous screening process. All candidates had to submit letters of recommendation from employees in all classifications. And all 10 candidates were interviewed by members of the team that designed the ombuds program. President Al Narath made the final selections after the team finished its work.

Rena Dietz (6200) led the recommendation team that proposed the ombuds program and the resource team that assisted Al in the selection process.



OMBUDS PLANNING AND RESOURCE TEAM members and the Labs' new ombuds are all smiles as the ombuds prepare to take on their new duties. Mike Birnbaum, top photo, standing at right, who will counsel Labs employees from his Livermore office, is pictured with team members (clockwise from Mike) Tom Harrison (8451), Liz Cox (8301), and Jim Wang (8111). In bottom photo, Wendell Jones (second from right), who will operate from Albuquerque, is surrounded by (clockwise from right) Ed Cassidy (7550), Ruby Cochrell (6400), B.J. Jones (7543), and Renae Dietz (6200). Resource Team members not pictured are Larry Carrillo (9331), Nancy Clark (2525), Jim Rice (6500), Ron Taylor (2712), Judy Tejada (8484), and Susie Wilson (5951).



"The whole project was a positive experience," Renae says. "Team members remained enthusiastic through months of meetings to design the program and interview candidates, and the candidates

themselves were complimentary of the process. One of them said it was one of the most positive experiences she had had in a long Sandia career."

Planning a High Priority

Although Mike and Wendell are still working out some office administration details (see box below), both are eager to dive into their new work.

"I'm looking forward to working with people and making a difference," says Mike. "When I looked at that job posting, I said to myself, 'That's something I'd really like to do.'"

And, he adds, "I hope people will feel comfortable enough to come in and talk to us, so we can help them. Wendell and I have known each other for years; I have tremendous faith in his judgment."

Wendell says planning ranks first on their list of things to do.

"Mike and I have decided to get the members of both teams together to help us write a mission statement, which we hope to have finished by later this month," he says. "From that, employees should get a more distinct picture of how the program will function." (The statement will be published in the *Weekly Bulletin* or LAB NEWS.)

He adds, "Mike and I don't see ourselves as competitors to existing programs, such as Equal Employment Opportunity and the Affirmative Action Council. One way we view ourselves might be like the hospital emergency room staff or your family practitioner. We look at the whole problem and then bring into the process any other appropriate resources."

Survey Indicated Dissatisfaction

Wendell says the program should hit the ground running — with a strong employee focus.

"We want this to have a human side from the start — nothing mechanical," he says. "Hopes are too high for it to start out doing less than is needed."

Al Narath believes the new ombuds program will ensure that employee concerns are addressed in complete confidence by caring individuals.

"The Sandians' Perspective survey made it clear that some employees didn't feel that their concerns and problems were being heard or properly addressed under the existing system," (Continued on Next Page)

Sandia Has Several Problem Resolution Groups

Ombuds Council — Composed of two full-time ombuds, one in Albuquerque and one in Livermore, available to talk with any Sandian and travel to all Sandia locations. Designed to help employees seek win-win solutions to their concerns before they grow into impassable barriers blocking job satisfaction and productivity. (See box at right for phone numbers.)

Affirmative Action Council — Formed in November 1988, the council includes five members of Sandia's Management Council and two directors, with support from the EEO/AA department manager and an EEO/AA staff member. Responsibilities include promoting the value of a culturally diverse workforce, supporting a positive EEO/AA work environment, and improving representation of minorities and women at all levels within the Labs. The Albuquerque phone number is 844-2966; the number at Livermore is 294-2284.

Corporate and Personal Integrity Program (C/PIP) — Headed by an administrator (currently shared by two people). Provides employees and others a route for reporting misconduct, fraud, waste, and abuse within Sandia to guarantee proper investigation. Reports to the Corporate and Personal Integrity Investigative Committee. Administered from Albuquerque; phone numbers are 844-1732 and 844-1744.

Preventive Medicine and Employee Assistance Program — A department (7034) within Occupational Medicine Center 7030, EAP provides a counseling staff available to all Sandians. Personal, family, work-related, and chemical dependency problems are among the broad range of topics the program's counselors address. Albuquerque counselors can be reached on 844-1513, and Livermore counselors on 294-2131.

Contacting the Ombuds

Neither ombuds has established an office yet. When they do, the locations will be published in the *Weekly Bulletin* and the LAB NEWS.

They can be contacted at the following telephone numbers: Wendell Jones, Albuquerque, 845-8301; Mike Birnbaum, Livermore, 294-2065.

They are available to talk with Sandians during normal business hours.

By the way, the word ombuds is a shortened version of ombudsman, the traditional title of someone who does what Mike and Wendell will be doing for Sandians. Also, it was selected during the program's creation as a gender-neutral title for the position.

Fun and Games

Clogging — The Seventh Annual Clogging Convention, sponsored by the New Mexico Clogging Association, will be held Saturday, Aug. 8, at the NM State Fairgrounds Youth Hall. A workshop will be from 9 a.m. to 4:30 p.m., and a dance and exhibitions are from 7 to 10 p.m. Spectators are welcome to attend free of charge. Sandia cloggers include Janey Carroll (7544), Terri Chiarella (7560), Pam Ramsey (151), Betty Gatto (7544), and DeBee Risvold (9226).

Golf — Winners of the Sandia Golf Association Mountain Classic Tournament held at Los Alamos Golf Course on July 10 were: A Flight — Charlie Salazar (2482) and Pres Herrington (9236), first place; Bob Wood (5102) and Gerry Record (7201), second place; Louis Flores (ret.) and Tony Lopez (ret.), third place; Daryl Dew and Jay Jojola (1243), tied for fourth place with Dan Williams (7941) and Mark Smith; B Flight — Randy Montoya (2831) and Tim Dubay (2663), first place; Robert Walsh (2482) and Rick Anderson (2482), second place; Randy Cusenbary (2664) and Andy Wilken (9811), third place; Pro Padilla (7612) and Larry Wilhelm (7328), tied for fourth place with Jake Romero (7328) and Dick Precit (2235).

Welcome

Albuquerque — Donald Campbell (7944), Jake Jones (2612); **Other New Mexico** — Jimmy Jaramillo (7811).

Elsewhere: Texas — Louis Gritz (1513); **Utah** — Troy Teeples (7531); **Virginia** — Sue Collins (7722).

Take Note

A series of seven financial workshops called "Take Charge of Your Life by Taking Charge of Your Money" will be held on Tuesdays, Sept. 8 through Oct. 27 at Central United Methodist Church (1615 Copper NE). Participants can choose to attend from 9 a.m. to noon or from 6:30 to 9 p.m. The workshops are sponsored by the Bernalillo County Extension Service and the American Association of Retired Persons. Registration is \$10 if received by Aug. 21 or \$15 at the door on a space-available basis. For more information, call Patricia Aaron on 243-1386. Applications are available at the Cooperative Extension Service Office, 1510 Menaul NW.

(Continued from Preceding Page)

Ombuds on Job

says Al. "Wendell and Mike are now available to listen to these folks and work with them. I hope Sandians will take full advantage of this new service."

Meanwhile, the Corporate and Personal Integrity Program (C/PIP), designed as a conduit from employees and others for information on misconduct, fraud, waste, and abuse within Sandia — and which has filled some of the role now shifted to the ombuds program — continues under a different group.

Marv Torneby, Manager of Staff Employment and Personnel Policy Dept. 7531, who has administered C/PIP since it began operating in 1988, has relinquished that post. He was replaced by Harold Folley and Betty Turk of the General Law Center 210.

Harold says that when they are functioning in their new role, they will not be functioning as part of the Labs' legal organization. "This gives us the freedom to act independently and take whatever actions are required in the C/PIP context," he says.

•HK

Sandia News Briefs

Labs Loans Emergency Equipment to Albuquerque

Through an arrangement with DOE, Sandia has loaned the City of Albuquerque Fire Department two trailers of specialized emergency response rescue equipment. In return, the department's Urban Search and Rescue Team agrees to respond to emergencies requiring use of the equipment anywhere in New Mexico. Duane Hughes, Manager of Emergency Management Dept. 7443, says the equipment, including "jaws of life," special saws, portable power tools, emergency lighting, and generators, can be used in emergencies such as structure collapses or vehicle accidents. Joint training and use of the equipment involves units from the city, state, and Kirtland AFB.

Owyoung Chairs Optical Society National Meeting in Albuquerque

Del Owyoung, Manager of Photonics Research Dept. 1312, is the chairman of the Optical Society of America's (OSA) 1992 annual meeting, to be held September 20 through 25 in Albuquerque. Del says he is particularly pleased that this year's OSA meeting is being held in conjunction with the American Physical Society's Eighth Interdisciplinary Laser Science Conference. "This is a consolidation that makes sense," he says.

The OSA meeting, headquartered at the Albuquerque Convention Center, has accepted nearly 1,200 papers. OSA officials expect about 4,000 people, including exhibitors, to attend.

Transportation Department Funding Labs Highway Safety Research

Sandia and the Department of Transportation have reached agreement for the Labs to develop technology that will improve the safety of commercial highway vehicles. Senator Pete Domenici announced the \$1.07 million agreement Monday, saying it is "one other great example of the many partnerships that can be made between the Labs and industry." DOT will channel funding through its Federal Highway Administration (FHWA) to Sandia's Commercial Vehicle Safety Systems program for research that will focus primarily on the safety of commercial trucks, including those that carry hazardous materials. Specific research will include driver sensory enhancement systems, vehicle and driver monitoring and inspection, communications technology, and vehicular control.

The project will be pursued under the FHWA's Intelligent Vehicle and Highway Systems program.

Louden Earns Employee Benefits Specialty Certification

Louise Loudon of Health Planning and Administration Dept. 7543 has earned the Certified Employee Benefit Specialist designation. She qualified by passing 10 national employee benefit exams. The certification is issued by the International Foundation of Employee Benefits Plans and the Wharton School of the University of Pennsylvania.

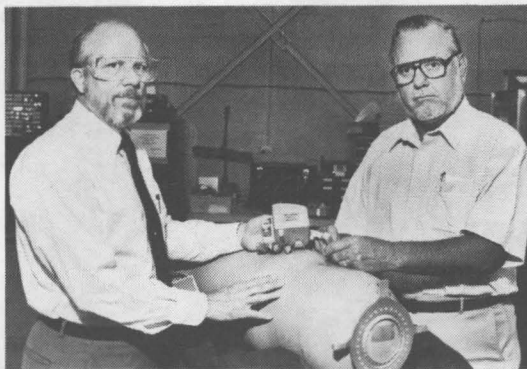
Send potential Sandia News Briefs to Editor, Dept. 7162.

Corporate ES&H Award Winners

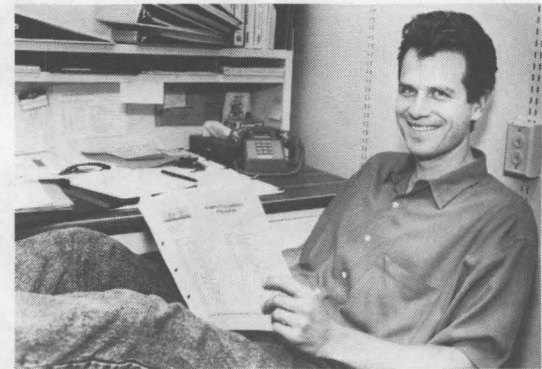
Sandia's first Corporate ES&H Award winners received their citations last month at a Sandia Program Council meeting (LAB NEWS, July 24). The winners have since been photographed.

These winners are:

- Gary Nordyke (361) and Ross Yingst (5512) — For using quality processes in the development of procedures to avoid the generation of mixed waste during Joint Test Assembly operations, which allowed the continuation of operations critical to national defense, in compliance with environmental and other regulations.
- Robert Hawk (2482) and Debbie Tricoglou (2483) — For establishing, refining, and implementing a chemical management system that manages more than 500 chemicals routinely used by departments 2482 and 2483.
- J.F. Nagel (5711) — For writing the Management Surveillance ES&H Standard Operating Procedure, using extensive customer input in a quality process.
- Eloy Gutierrez (5501) — For intensive effort in producing user-friendly software and providing customer service to help in the completion of Integrated Project requirements Labs-wide.



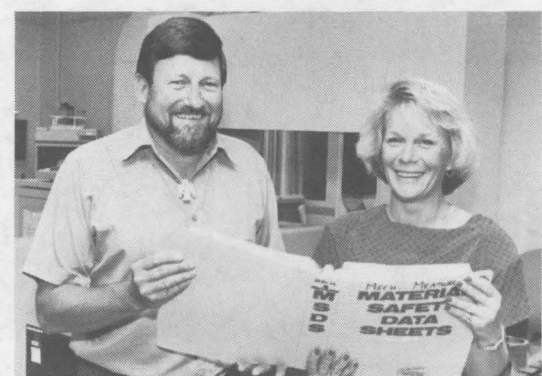
Gary Nordyke (361), Ross Yingst (5512)



J.F. Nagel (5711)



Eloy Gutierrez (5501)



Robert Hawk (2482), Debbie Tricoglou (2483)

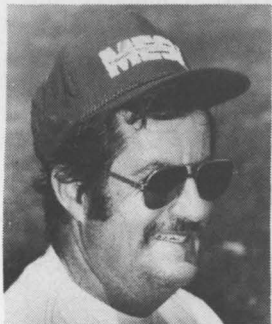


SWIMMING AND SMILING — Christy Ibarra (left) and Monica Beard go for a morning swim.

'Working' Vacation Was Time Well Spent

Summer vacations are as individual as the people who take them. Some go camping, others travel, and still others stay home with family. But three Sandians recently spent their summer vacations in an unusual way.

Bob Alexander (7732), Lynn Fitzpatrick (7214), and John German (7162) each spent a week in June as volunteer counselors for the Muscular Dystrophy Association's New Mexico summer camp. The week-long camp pairs children who have muscular dystrophy with volunteer attendants from all walks of life.



Bob Alexander (7732)

"A vacation spent enjoying yourself is great," says Bob. "But it's even more satisfying when you use your vacation time to help others enjoy themselves." Bob also volunteers at a week-long camp for young cancer patients each summer.

The term muscular dystrophy refers to any of 40 neuromuscular diseases that typically affect young children. Each of the genetic diseases affects different muscle groups, so there's a wide range of disabilities at the camp.

"Some of the kids are fully ambulatory, and others get around with the help of braces or wheelchairs," says John. "Our job is to make sure any disabilities the campers have don't hold them back. For many of them, we're their arms and legs for that week."

During the week, campers and attendants go fishing, boating, and swimming, do arts and crafts, and play basketball and bingo. Nighttime activities include dances, pizza parties, a talent show, and a campfire. Depending on the abilities of each camper, attendants may also help their campers eat, dress, take a shower, or do anything else the camper's family usually does at home. This year's camp was held at the New Mexico Institute of Mining and Technology in Socorro.

"Camp may be the only opportunity for the kids to get away from home all year," says Lynn,



TRUST ME! — Maria Apodaca and John German (7162) take Maria's first plunge off a diving board.

a four-year camp veteran. "Every year, at least one young camper cries the first night because he's homesick. By the end of the week, that same camper is usually crying because he's leaving.

"It's easy to write a check to your favorite charity," she says. "But giving your time lets you see what effect your contribution is having on others. That's what keeps me coming back." ●

(Photos by Randy Montoya)



STATE POSTER CHILD Micah Lynn Hadaway leads her blindfolded attendant Lori Jordan through a maze as Lynn Fitzpatrick (7214, background) cheers them on.

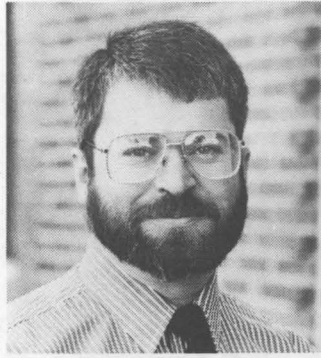


RACING THE CLOCK — Wheelchair biathletes Lee Towndrow (front) and James German take aim at a target during the camp Olympiad.

Supervisory Appointments

WILLIAM COOK to Manager of Advanced Systems Development Dept. 5716.

Bill joined Sandia's Scientific Network Design Division in 1981 and designed and implemented network protocol software.



WILLIAM COOK

He left Sandia in 1985 and became an assistant professor of mathematics and computer science at Evangel College in Springfield, Mo. He rejoined Sandia in 1987 as a member of the Advanced Systems Development Division, where he designed and implemented automated technical control software for reimbursable customers. Projects Bill has worked on include the Tech Control Trainer, a device to simulate the actions of a complete suite of equipment; the Tech Control Automation Proof-of-Concept System, an automated technical control system (joint project with MIT Lincoln Labs and Computer Sciences Corp.); and Tech Control, Automation, Maintenance, and Support System, the automated tech control and maintenance software based on government and industry software standards.

He has a BA and an MA in mathematics from the University of Missouri and an MS in electrical engineering from UNM. Before joining Sandia, he worked for the University of Missouri Electrical Engineering Department.

Bill enjoys amateur radio, reading, and playing the piano. He and his wife Beth have four children and live in NE Albuquerque.

AJOY MOONKA to Manager of Advanced Nuclear Power Technology Dept. 6471.

Ajoy joined Sandia in 1990 as a member of the Advanced Nuclear Power Technology Division. He was program manager for DOE initiatives associated with Nuclear Plant Life Extension (PLEX) Industry Reports and the Early Site Permit Program.



AJOY MOONKA

In 1991, he was named Acting Manager of the department he now heads, which operates DOE's Light Water Reactor Technology Management Center at Sandia and is responsible for implementing nuclear energy elements of the National Energy Strategy, working in cooperation with the US nuclear industry.

Ajoy's engineering career began in India in 1974 when he was an engineering trainee. He later worked in India for the TELCO Mercedes-Benz Plant, Indian Airlines, and Hindustan Aeronautics.

From 1978 to 1980, he was a faculty teaching and research assistant in aerospace engineering at the University of Maryland. He worked for Nutech Engineers in San Jose, Calif., and Chicago from 1980 to 1989. He then worked for Advanced Technology Engineering Systems, Inc. in Chicago in 1990 before coming to Sandia.

Ajoy has a bachelor's degree in aeronautical engineering from the Indian Institute of Technology in Kharagpur, India, and a master's degree in engineering from the University of Maryland. He continued management studies through the University of California's Berkeley MBA Program.

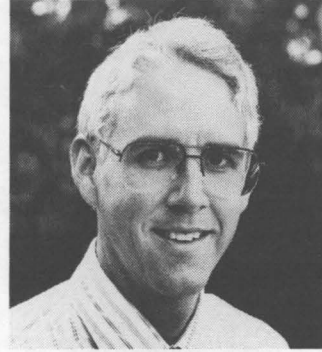
Ajoy is a Registered Professional Engineer in California. He is a member of the American Nuclear Society and the American Society of Mechanical Engineers, and serves on national committees for both. He was honored as one of the "Outstanding New American Citizens of 1987-88" by the Citizenship Council of Metropolitan Chicago. He served on Sandia's Corporate and Org. 6400 Management Restructure Study Teams and Individual Performance Awards quality action teams.

Ajoy enjoys reading, playing with his children,

leisure travel, and ethnic foods. He and his wife Sunita have two children and live in Sandia Heights.

DARRYL DRAYER to Manager of Engineering Design Dept. II 7942.

Darryl joined Sandia in 1981 as a member of the Nuclear Reactor Safety organization. His work included probabilistic risk assessment for the Severe



DARRYL DRAYER

Accident Risk Reduction program. Other areas he has worked in include domestic safeguards and security, radiation hardness assurance, domestic security and treaty verification, international safeguards, and intrusion detection systems. While in the International Safeguards Division, he worked on development and commercialization of the Cobra Seal, a fiber-optic-based security seal now used by the International Atomic Energy Agency. In 1990, Darryl was on special assignment as an international policy analyst for DOE's International Safeguards branch at DOE Headquarters in Germantown.

Darryl has a BS and an MS in nuclear engineering from Kansas State University.

He enjoys camping with his family and hiking, and manages a farming interest in Kansas.

Darryl and his wife Donna Louise have two children and live in the NE Heights.

KAREN WEBER to Manager of Automated Test Systems Dept. 9215.

Karen has worked on the Payload Equipment Tester (PET) Project since she joined Sandia in 1987 as a member of the Satellite Systems Division. She worked on PET, a software system to test satellite payloads, in that division until 1988, when the Payload Test Development Division was formed



KAREN WEBER

and she became pilot project leader. She became PET's software project leader in 1991.

Karen has a BS in electrical engineering from Southern Methodist University and an MS in computer science from the University of Texas. Before joining Sandia, she worked at Electrospace Systems, Inc., in Richardson, Tex.

She enjoys playing with her children, hiking, golfing, walleyball, movies, and playing piano. Karen and her husband Clay have two sons and live in the NE Heights.

CYNTHIA SCHNEEBERGER to Assistant to Vice President 1000.

Cynthia joined Sandia in 1984 as a member of Purchasing's Manpower Contracting Division, where she procured contractor personnel and equipment maintenance contracts. She became a senior Sandia contracting representative in 1987 and was assigned to the Computer Procurement Division, where she was responsible for computer hardware, software, and maintenance contracts.



CYNTHIA SCHNEEBERGER

She transferred to Purchasing Div. 3712 in 1988, and was responsible for procuring R&D hardware and services for Org. 9100. In 1990, she moved to the Purchasing Policies and Procedures Division as training coordinator responsible for Purchasing's training programs. She moved to the

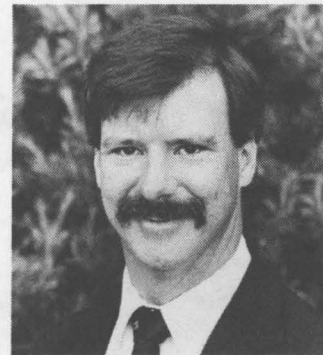
Technology Transfer organization in 1991 as senior industrial agreements specialist, working on cooperative R&D agreements (CRADAs) with General Motors, SEMATECH, the National Center for Manufacturing Sciences, and others.

Cynthia has a BA in business and an MBA from New Mexico State University. Before joining Sandia, she worked for Sperry Corporation and Dynaletron. She is a member of the National Contract Management Association and is a Certified Professional Contract Manager.

She enjoys skiing and travel. Cynthia and her husband Tim have one child and live in the NE Heights.

WALTER RUTLEDGE to Manager of Aerodynamics Dept. 1554.

Walt joined Sandia in 1983 as a member of the Aerospace Projects Division, where he did aerodynamic design analysis for both ballistic and maneuvering reentry systems. He was responsible for the aerodynamic performance predictions for the SWERVE III flight system. In 1991, he joined Aerodynamics Division I, doing aerodynamic predictions and flight dynamics simulation for the Standoff Bomb Program and serving as team leader for related activities in the Aerodynamics Department.



WALTER RUTLEDGE

Walt has a BAE and an MS in aerospace engineering from Auburn University and a PhD in aerospace engineering from the University of Texas. He was with the Naval Surface Weapons Center in Dahlgren, Va., before joining the Labs. Walt is a senior member of the American Institute of Aeronautics and Astronautics.

He enjoys camping, hiking, skiing, and soccer. Walt and his wife Karen have two children and live in the NE Heights.

VICTOR HARPER-SLABOSZEWICZ to Manager of Hermes III Operations Dept. 9343.

Victor joined the Labs in 1987 as a member of the Simulation Physics Division. He worked on the development of advanced radiation simulation sources for Saturn, SPEED, and Proto-II accelerators and was in a working group on the use of inertial confinement fusion for weapons effects simulation. He also studied the use of ion beams for X-ray effects simulation.

In December 1990, he became acting supervisor of the Department he now heads.

Victor has a BS in physics from Stanford University and an MS and PhD in applied science from the University of California. He served with the Air Force from 1974 to 1982. He is a member of the American Physical Society. In 1990, Victor served as a Sandia science advisor supporting elementary and middle school science and math curriculums in the Albuquerque area. He was a member of the quality action team that selects articles for Sandia's *Testing Technology* newsletter.

Victor enjoys camping, hiking, gardening, and family activities. He and his wife Patti have four children and live in the NE Heights.



VICTOR HARPER-SLABOSZEWICZ

Victor enjoys camping, hiking, gardening, and family activities. He and his wife Patti have four children and live in the NE Heights.

Congratulations

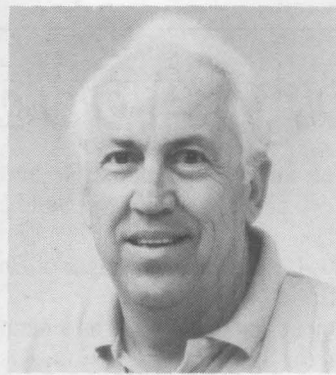
To Cindy and Joe (6111) Henfling, a daughter, Kaitlyn Diane, July 24.



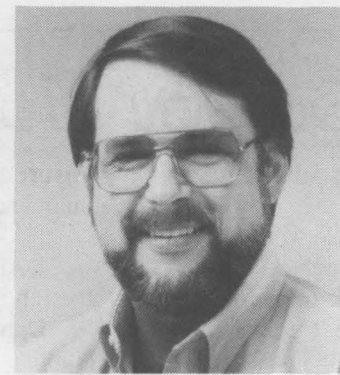
MILEPOSTS

LAB NEWS

August 1992



Manuel Archuleta
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Bruce Engler
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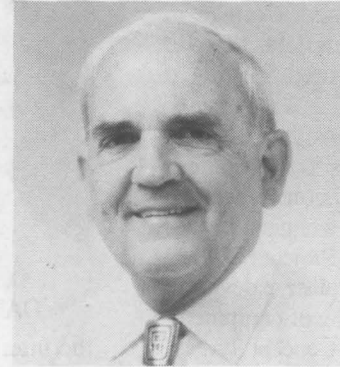
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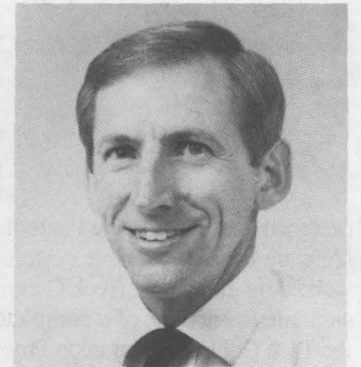
Frank Muller
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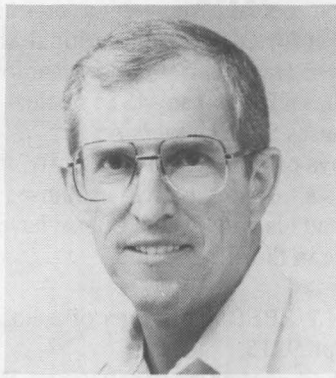
Christopher Cameron
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Howard Gerwin
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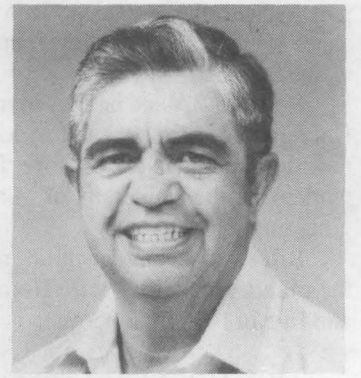
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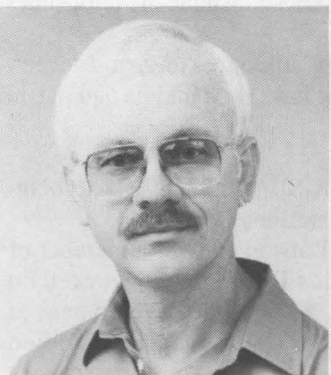
Kenneth Kimball
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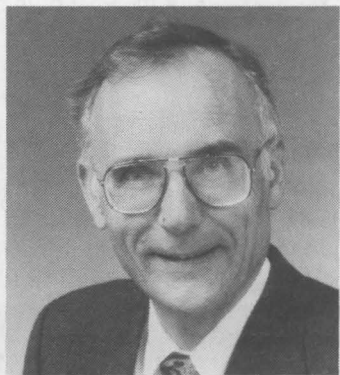
Louis Archuleta
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Paul Martinez
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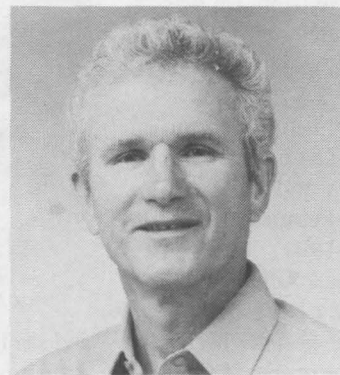
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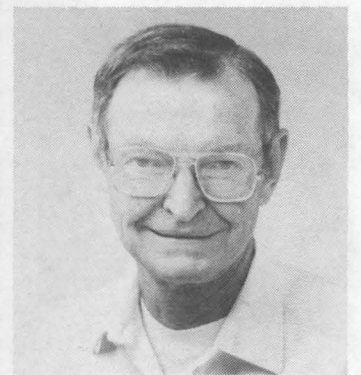
Jack Wirth
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Ron Hadley
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David Shirey
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Irving Hall
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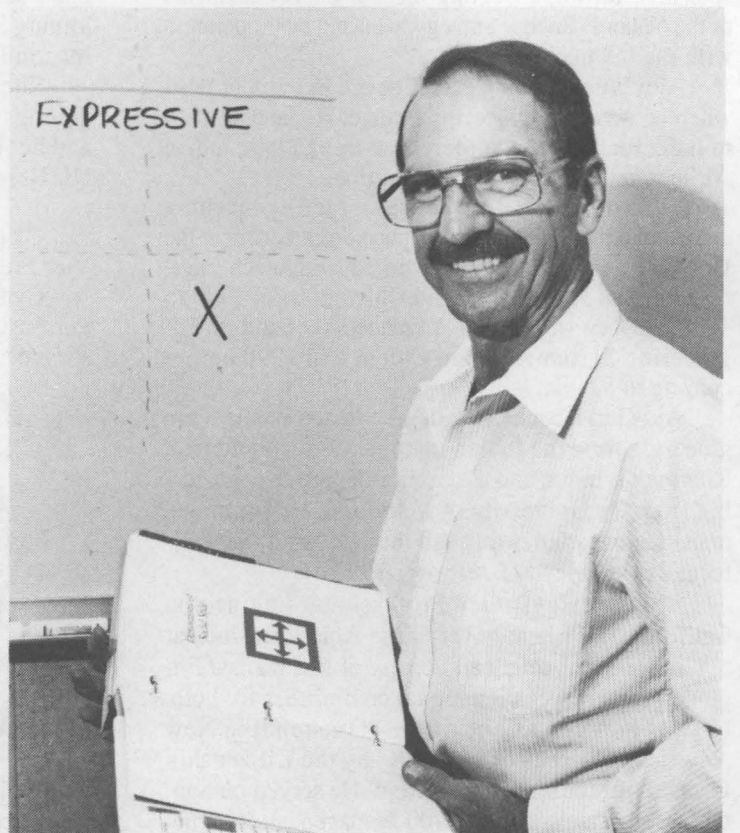
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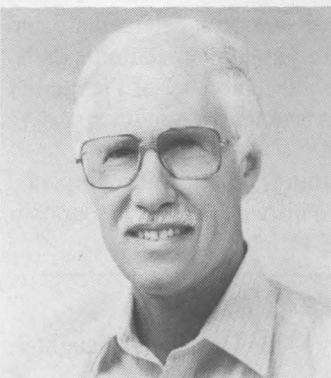
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George Clark
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Dave Bushmire
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Keith Treece
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Frederick Hartman
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Donald Gluvna
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UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS • UNCLASSIFIED ADVERTISEMENTS

Deadline: Friday noon before week of publication unless changed by holiday. Mail to Dept. 7162.

Ad Rules

1. Limit 20 words, including last name and home phone (the LAB NEWS will edit longer ads).
2. Include organization and full name with each ad submission.
3. Submit each ad in writing. No phone-ins.
4. Use 8 1/2 by 11-inch paper.
5. Use separate sheet for each ad category.
6. Type or print ads legibly; use only accepted abbreviations.
7. One ad per category per issue.
8. No more than two insertions of same "for sale" or "wanted" item.
9. No "For Rent" ads except for employees on temporary assignment.
10. No commercial ads.
11. For active and retired Sandians and DOE employees.
12. Housing listed for sale is available for occupancy without regard to race, creed, color, or national origin.
13. "Work Wanted" ads limited to student-aged children of employees.

MISCELLANEOUS

- PUPPIES:** Chesapeake Bay retriever/malamute/rottweiler mixes, good watch dogs, 8 wks. old, free to good homes. Moore, 281-2480.
- METAL DESK,** 24" x 54", 6 drawers, Formica top, good condition, \$75. Grosshans, 293-2937.
- NUMARK STUDIO MIXER,** Model DM-1000, 2 phono inputs, 2 microphone inputs, amplifier outputs, fader, cue, and talk features, \$150. Harrison, 897-0658.
- WIRE FENCE DOG RUN** w/gate, approx. 20' x 5', free if you pick up. Dickenman, 892-9561.
- PORTABLE CELLULAR TELEPHONE,** Tandy CT-302, used 2 mos., \$300; Whirlpool portable electric clothes dryer, \$100; Fry-Daddy, \$5. Ottinger, 242-5944.
- SUPERSINGLE WATERBED,** complete w/3 drawers below, excellent condition, \$85. Sanchez, 836-2782.
- WOOD-BURNING STOVE;** living room set: couch, love seat, chair, coffee table, side table, more. Marchi, 898-3471.
- SCUBA TANKS,** 3,000-psi, excellent condition, \$75/ea.; regulators, weight belts, other SCUBA gear. Burch, 299-1972.
- CHIHUAHUA PUPPIES:** AKC-registered, smoothcoat males, champion-sired, first shots, wormed, guaranteed, \$200. Sargent, 865-3227.
- SATELLITE DISH,** 10-ft. Beachcraft, Drake receiver, Tracker II accuator, top condition, \$750. Baca, 265-2881.
- PHOTOGRAPHIC ENLARGER,** DeJur, enlarges up to 16 x 20, good for student use, \$20. Renk, 242-1277.
- HOPSCOTCH RUG,** 86" x 36" W, w/playing law and rules, indoor/outdoor, new from Gregory's. Wagner, 823-9323.
- KENMORE ELECTRIC DRYER,** white, works great, \$50. Cheng, 275-7008.
- NORTHGATE 386,** SVGA monitor, OS/2 2.0, Panasonic printer, Logitech mouse, Paradox, QuattroPRO, Freelance, all accessories, must sell, \$2,100. Paulsen, 880-0485.
- ELECTRIC RANGE,** white, good condition, \$150. Nelson, 266-3952.
- OAK BILLIARD TABLE,** 1-in. slate, all accessories, \$1,850; computer table, \$20; printer console, \$10; office-type daisy-wheel printer, \$200. Laguna, 298-1732.
- ANTIQUITY VANITY,** w/mirror, \$150; twin-size innerspring mattress, \$25; harvest gold couch, \$75. Graham, 293-7302.
- GARAGE SALE:** Aug. 7-8, 8 a.m., refrigerator, small appliances, men's clothes, books, CP/M computer, disks, tableware, misc. Everts, 822-1767.
- KENMORE FREEZER,** 23 cu. ft., \$175 OBO. Pinkerton, 260-8243.

- WEDDING RING SET,** .38-carat in a delicate setting, \$1,500 OBO. Kill, 281-5591 after 6 p.m.
- OAK DESK,** \$50; microwave, \$75; dining room table, 6 chairs, oak, \$200. Dennis, 296-4635 after 6 p.m. or leave message.
- CONN TENOR SAXOPHONE,** excellent sound, must sell/sacrifice, \$650 OBO. Newman, 256-7331.
- YAMAHA KEYBOARD,** PSR-16, like new, \$50; wooden porch swing, 5-ft., \$20. Miyoshi, 821-9118.
- METAL TOOLBOX** for full-size pickup, Delta, \$75; chrome rear bumper for '90 Ford F-150, \$60. Fink, 292-8197.
- AT&T 6300 COMPUTER,** PC/XT-compatible, CGA monitor, 20MB hard drive, 5.25 FD, manuals, shareware, 640KB RAM, \$350. Spielman, 292-4953.
- CHARTER AR-7 .22-CAL. RIFLE,** auto 8-round, 2 extra mags, disassembles & stores in stock, floats, \$60 firm. Ennis, 298-3631.
- FOOTBALL TICKETS,** Bears vs. Cowboys, preseason game in Dallas Aug. 28, 2 tickets, \$25/ea. Miller, 292-5067.
- KITTENS,** gray, friendly, available Aug. 14, free to good home. Ludwigsen, 821-9624.
- WASHER & DRYER,** 2 yrs. old, \$350; stoneware service for 4; bed frame; stereo cabinet; speakers; aquarium. Freshour, 296-3114 after 6 p.m.
- GARAGE SALE,** 9 a.m.-5 p.m. Aug. 8, noon-5 p.m. Aug. 9, chair, luggage, misc., Juan Tabo/Indian School area, 11606 Snowheights NE. Simpson, 298-4749.
- QUEEN WATERBED,** 12-drawer pedestal, 20-in.-high bookshelf headboard, mattress, heater, liner, dark pine, \$300 OBO. Rosul, 281-4114.
- 486-33Mhz DX,** 2MB RAM, high-res. monochrome, Microsoft mouse, Hayes modem, 40MB Seagate HD, surge protector, Citizen printer, software, \$1,650. Norton, 299-3763.
- RED TAIL BOA,** adorable baby, friendly, great personality, affectionate, perfectly tame, w/aquarium, needs loving care, \$175. Chernoff, 821-0693.
- GLASS DINETTE SET,** 42-in square, w/brass accents, 4 blue velour & brass chairs, \$200 OBO. Kane, 291-8576.
- EXERCISE BIKE,** \$75; sewing machine, hemmer, industrial type, \$50. Breeze, 275-9002.
- FISHER-PRICE KITCHEN,** w/dishes, many authentic-looking food accessories, \$125; unusual antique 9-drawer cherry writing desk, \$250. Sisneros, 899-8048.
- LARGE COUCH,** light brown w/blue, oak front, \$300. McKay, 897-3945 after 6 p.m.
- NEW CUSTOM WEDDING SET,** engagement 0.78 carats, flanked two 0.15, ideal cuts, VSI-1H color, appraised at \$8,330, sell for \$5,500 OBO. Evans, 292-2367.
- LARGE FARBERWARE CONVECTION OVEN,** Precision Probatic control time, 2 racks & broiler pan, like new, \$100 OBO. Stefanov, 299-7009.
- COMPRESSOR,** Type A6, for older GM cars, rebuilt, w/o clutch, \$35. Guilford, 255-6297.
- USED CERAMIC TILE,** mottled brown, free; 2 truck tires, 7.00-15, free; sliding bath/shower door, \$10. Van Deusen, 291-8196.
- LOBO SEASON BASKETBALL TICKET,** Sect. 23, Row 32, \$238. Sanchez, 298-3130.
- NIKON 8008 CAMERA,** AF, 50mm 1.8 lens, 28/85 zoom, like new, \$650. Allen, 296-5129.
- COLD SPOT REFRIGERATOR,** \$300; waterbed, excellent condition, temp. control, beautiful headboard, \$350. Huston, 265-1831.
- UTILITY TRAILER,** 16-ft., tandem axle, brakes all 4 hubs, \$1,000. Gonzales, 877-4914.
- TUNTURI 401 STEPPER,** excellent condition, \$60. Clevenger, 821-0046.
- IBM COMPUTER GAMES,** King's Quest V, Leisure Suit Larry I, update, 512K, VGA, excellent condition. Love, 271-9970.

- IBM-COMPATIBLE COMPUTER,** 20MB hard disk, 13-in. color monitor, wide-carriage daisy-wheel printer, \$450; floor lamp, \$10. Forster, 293-7231.
- BOYS' BUNK BEDS,** dark wood, includes mattresses. Catanach, 265-2290.
- BROWN-PLAID SOFA,** 81-in., Scotch-guard, no stains or tears, \$75 OBO; Rival electric food slicer, Model 1030V, used twice, \$45 OBO. Dixon, 298-5617.
- STAINLESS TABLEWARE,** Oneida Michelangelo Heirloom, 8 six-piece place settings, serving pieces, total 63 pieces, new, \$525. Pitts, 293-5481.
- DANISH DINING CHAIRS (4),** gray/blue upholstery, \$50/all. Spiers, 275-3655.
- ENGLISH SPRINGER SPANIEL PUPPIES,** AKC-registered, tails, dew claws, shots, liver & white, ready Aug. 24, \$150/ea. Roberts, 299-5671.
- STEEL-CHANNELED ROOFING MATERIAL,** approx. sheet size 12' x 2-1/2', 7 sheets, free, you haul. Hammond, 294-2045.
- MACINTOSH SE, 2MB RAM, 40MB HD,** minor HD problems, otherwise excellent condition, \$650. Ray, 294-7720.
- REFRIGERATOR/FREEZER,** Frigidaire, frost-free, light green, \$110. Harding, 265-4020.
- SOFA/SLEEPER,** dining table w/4 chairs, recliner, upholstered rocker, wood/glass coffee/end tables, lamps, microwave, daybed w/pop-up unit. Beardsley, 292-5910.
- PEAVEY T-40 BASS GUITAR,** w/hard case, excellent condition, \$250 OBO. Padilla, 873-0271.
- WATER LILIES,** 5"-6", \$10/ea.; children's educational computer, Socrates, uses standard color TV screen, w/2 additional cartridges, \$50. Halbgewachs, 268-1584.
- NEW CARPET,** 12' x 10', med. pile, solid color, soft Southwestern tone, \$80. Stephenson, 296-9330.
- GE DISHWASHER,** 1985, works, \$50; doghouse, med., w/shade, free; Hoover upright, switch or motor out, \$10. Goetsch, 892-8366.
- ENCYCLOPAEDIA BRITANNICA,** 28 vols., 1980, perfect condition, \$200; Conn trombone, w/2 mutes & accessories, \$275. Brett, 282-1649.
- VANITY MIRROR/MEDICINE CABINET,** 42"W x 28"H, \$20; indoor oak door, 80" x 32", w/hardware, \$20. Campbell, 268-4925.
- COMMODORE 64K w/Drive VIC 1541,** printer 1526, joystick, instructional disks, make offer. Sweet, 255-0255.
- BENTWOOD ROCKER,** good condition, \$35; color TV, works, \$30; large set duplos, w/building mat & storage bucket, \$20. Johnson, 299-5459.
- OLYMPUS 35mm CAMERA,** OM77AF, 35-70mm auto-focus lens, 70-150mm zoom lens, auto advance, built-in flash, carrying case, \$350. Sanchez, 255-5515.
- HOTPOINT REFRIGERATOR,** brand new, almond, 16.5 cu. ft., \$200. Myers, 867-5688.
- CAMPER SHELL** for short-bed, small pickup truck, white with black stripe, extra headroom and storage, make offer. Harrington, 899-1277.
- RECLINER,** \$40; kettle barbecue, \$10; electric lawn trimmer, \$15; box fan, \$10; photosensitive porch lamp, \$5. Forster, 293-7231.

TRANSPORTATION

- '86 DODGE CARAVAN LE,** AT, PS, PB, AC, tape, excellent condition, below book. Carlson, 897-1850.
- '69 PONTIAC FIREBIRD,** 400 engine w/less than 10,000 miles since overhaul, 3-spd. manual, PS, 90% restored, \$3,995. Leland, 828-1075.
- '88 CHEV. PICKUP,** 1/2-ton, stepside, Silverado, AC, AT, 350 V-8, towing pkg., anti-lock brakes, tilt, cruise, AM/FM cassette, 2-tone, \$9,500. Jackson, 281-8927.
- '83 MAZDA RX7,** Limited Edition, AC, cruise, new upholstery, Blaupunkt stereo, excellent condition, best offer. Trudo, 281-3522.

- '65 OLDS CUTLASS CONVERTIBLE,** solid car, runs great, \$3,500. Ludwigsen, 821-9624.
- '89 MUSTANG LX, AT,** cruise, AC, AM/FM cassette, tilt, new tires, low miles, \$6,000 OBO. Heath, 296-3739, leave message.
- '90 YAMAHA Y-Z 250,** showroom condition, \$2,300. Dennis, 296-4635.
- '80 HONDA CB400T MOTORCYCLE,** 8,500 miles, excellent condition, w/cover, \$500. Garsow, 296-9451.
- '74 VW SUPERBEETLE,** AM/FM cassette pullout stereo, runs well, reliable, good condition inside & out, \$1,650 OBO. German, 247-2298.
- '69 MUSTANG,** 289 V-8, gold, beautiful interior, AC, must sell, \$3,000 OBO. Higgin, 294-5676.
- '76 PLYMOUTH VOLARE,** 4-dr. sedan, original owner, AT, AM/FM, \$300. Sherman, 292-3297.
- '83 CHEV. CITATION,** AT, AC, \$1,200 OBO. Bronkema, 821-2119.
- WOMAN'S SCHWINN BIKE,** 3-spd., blue, \$30; woman's bike, 10-spd., red, \$40. Miyoshi, 821-9118.
- WOMAN'S 10-SPD. BIKE,** 26-in., excellent condition. Kercheval, 1-864-6549.
- CENTURION LIGHTWEIGHT BICYCLE,** 10-spd., metal gray, accessories included, \$95 OBO. Locher, 266-2021.
- '72 PLYMOUTH STATIONWAGON,** AT, 400 V-8 engine, 8 passengers or cargo, \$600. Bingham, 298-6489.
- REPOS: '72 BMW,** 2-dr., silver, 3.0CS coupe, 6-cyl., 4-spd., 134,044 miles; '81 Mercedes SL, 2-dr., light blue, 6-cyl., 4-spd., 106,653 miles, AM/FM stereo, AC, PB, PS; '85 Lincoln Continental, 4-dr., brown, 8-cyl., AT, 159,881 miles, AM/FM stereo, AC, PB, PS; '80 BMW 321, needs repairs to be serviceable; bids accepted through Aug. 17; we reserve the right to refuse all bids; subject to prior sale. Sandia Laboratory FCU, 293-0500.
- '81 HONDA CN200,** 5,600 actual miles, excellent condition, \$650. Cox, 296-9493.
- '76 HONDA SUPERSPORT MOTORCYCLE,** garaged, good condition, \$700. Breeze, 275-9002.
- '83 TOYOTA LANDCRUISER,** 4-dr. wagon, 60K miles, new tires, above average condition, \$6,800. Platzbecker, 299-6096.
- '79 DATSUN PICKUP,** camper shell, 62K, long bed, 4-spd., AM/FM cassette, runs well, \$1,250. Sutherland, 345-1183.
- HOT ROD,** 1923T Corvette motor, fast, turbo 350 trans., 9-in. Ford rear end, tan interior, blue body, \$9,000. Marchi, 291-9681.
- '86 DODGE RAM 50 PICKUP,** 1/2-ton, excellent running condition, \$1,900; '82 Renault LeCar, 4-dr., good running condition, \$750. Shahinpoor, 822-9521.
- '90 GEO PRIZM,** 4-dr., 25K miles, AT, AC, PS, AM/FM, still under warranty, excellent condition, \$6,400 OBO. Phipps, 299-3151.
- GIRL'S 16-IN. BIKE,** excellent condition, \$30; boy's 20-in. BMX bike, excellent condition, \$30. Clevenger, 821-0046.
- '75 CHEV. IMPALA,** 4-dr., PB, PS, AC, good condition, \$700. Gray, 268-0144.
- '87 FORD VAN,** Trans-Aire conversion, excellent condition, one owner, 75K, loaded, TV, tape w/equalizer, CB, dual tanks, \$10,500. Lawson, 828-0455.
- '82 CHEV. C-10 PICKUP,** PS, PB, 6-1/2-ft. bed, dual tanks, \$2,300. Dean, 275-7084.
- '92 SATURN SL2,** 4-dr., AT, AC, PW, PL, cruise, tilt, cassette, power sunroof, 3-yr./36K warranty, 12K miles, \$11,800. Torres, 898-2641.
- '82 CANAM 400 DESERT BIKE,** excellent condition, only 600 easy miles, \$900 OBO. Padilla, 873-0271.
- BMX "EXPERT" MONGOOSE BICYCLE,** silver, all pads, 20-in., excellent condition. Brett, 822-1649.
- '81 BMW 320i,** 5-spd., AC, radio, alloy wheels, runs well, needs front end work, \$1,200. Campbell, 268-4925.
- '90 NINJA 600R,** w/tank pad, 1/2 bra, U-lock, 2 Kiwi helmets, 3,800 miles,

never dropped, 50-mpg, \$3,800 OBO. Cooper, 291-1690.

REAL ESTATE

- 2-BDR. MANUFACTURED HOME,** 1,560 sq. ft., 2 baths, country kitchen, den w/fireplace, covered patio, controlled-access park w/amenities, 500 Tyler Rd. NE, #15. Anderson, 888-3261.
- 3-BDR. HOME,** near Eisenhower School, 1-3/4 baths, large backyard, covered patio, new roof, \$84,900. Ludwigsen, 821-9624.
- 3-BDR. HOME,** 1-3/4 remodeled baths, 900-sq.-ft. workshop-garage, .25 acres, irrigation well, city utilities, beautifully landscaped, large garden, \$64,500. Roth, 344-7060.
- 2-BDR. HOME,** 1,600 sq. ft., 1-3/4 baths, formal living, 2-car garage, Four Hills Addition, assumable, non-qualifying. Smith, 275-8185.
- 1-3/4 ACRES,** Arboles, Colo., commercial, San Juan Drive, launch ramp upper end Navajo Lake. Gaeto, 881-9753.
- ADOBE HOUSE,** in Belen, nicely remodeled, 1,224 sq. ft., rental potential, no down, low interest, financing available, \$39,900. Roberts, 864-3529.
- LARGE MOUNTAIN CABIN,** partially furnished, w/indoor facilities, water, electricity, excellent fishing, hunting, hiking, privacy, low down, terms negotiable. Torrez, 298-4611.
- 5-BDR. HOME,** 2,605 sq. ft., new house in Executive Hills, pick your colors, great security & views, \$198,700. Mistretta, 291-9840.
- MOUNTAIN PROPERTY,** cabin on river near Mora, 1-1/4-acre wooded lot, 800 sq. ft., 2-bdr., 1 bath, year-round occupancy. Zimmermann, 292-5734.
- 2-BDR. CONDOMINIUM,** 1-3/4 baths, 1,190 sq. ft., mountain views, excellent location, garage, PITI \$576, 8-1/2% assumable, no qualifying. Keicher, 275-0334.

WANTED

- BABYSITTER,** for 2-yr.-old, occasional evenings, prefer teen girl, near Base area. Aragon, 292-4819.
- PRE-1974 AMERICAN-MADE CAR OR TRUCK,** for rebuilding project, need not be in running condition. Shank, 877-4497.
- FREEZER,** small-to-medium size, in good condition. Perrine, 293-1429.
- NORDICTRACK,** weight bench, weights, treadmill, gym set, Lifecycle; also, someone to share pet sitting. NE Heights. Janik, 293-2420.
- SITTER** for 2-yr.-old, Mondays & Wednesdays only, Aug. 10-26, 6-8:30 p.m., Tramway/1-40 area. Denaple, 298-2778.
- LIVE-IN PERSON** to care for elderly woman, can be male or female, must be able to cook & hold a valid NM drivers license, references required. Walker, 268-5353.
- ROOMMATE,** to share 2-bdr. 2-bath house, located at Juan Tabo & Menaul, \$300/mo. plus 1/2 utilities, furnished. Garrity, 275-3044.
- DINING ROOM SET,** Thomasville or equivalent. Neal, 299-4956.
- BASSINET,** infant car seat, baby stuff. Forster, 293-7231.
- THREE RIMS** to fit '84 Volvo 240DL; chest waders, size 9-1/2-10. Zirzow, 281-9896.
- AFTER-SCHOOL CARE/HOMEWORK HELP** for 12-yr.-old boy in Grants Middle School area. Eisler, 296-6122.

WORK WANTED

- HOUSESITTING** by responsible college student, long- or short-term, excellent if you're relocating on temporary assignment. Moreno,



Coronado Club Activities

Good Eatin' and Dandy Dancin' Tonight

WE LOVE 'EM — The Isleta Poorboys start the Club's Friday nights this month, and they're always mighty popular with the crowd. You can bet the menu for tonight, Aug. 7, is going to be popular, too. It includes shrimp scampi (\$9.95), T-bone steak (\$11.95), and the all-you-can-eat buffet, featuring baron of beef and New England style baked cod (\$6.95). Dinner is served from 6 to 9 p.m., and the Poorboys play from 7 to 11 p.m. Call now for reservations: 265-6791.

SPEND YOUR FRIDAY evening next week, August 14, at the Club's social get-together in the lounge. Enjoy munchies and lots of convivial company. See you there!

CHAMPAGNE AND LOS GATOS — Treat your taste buds to the delightful dishes offered at the Champagne Brunch on Sunday, Aug. 16, from 10 a.m. to 1 p.m. Then, dance the afternoon away to the sounds of Bob Weiler and Los Gatos at the Club's tea dance from 1 to 4 p.m. What could be better? Reservations required; call 265-6791.

RUNNIN' ROAD TO RUIDOSO — The Roadrunners RV Club plans a rip-roaring rendezvous in Ruidoso Aug. 17-20 at the Blue Spruce RV Park. For information about the trip or about the Roadrunners in general, call President Tex Vandt on 293-1249 or Wagonmaster John Smelser on 256-3108.

GOOD DEALS are what the Thunderbird card group gets at the every-other-Thursday card sessions at the Club. Cardmaster Jim McCutcheon says the action gets under way at 10 a.m., pauses for lunch, and ends at 3 p.m. or so. (Folks enjoy the coffee and cookies, too.) The next few dates are Aug. 20, Sept. 3, and Sept. 17.

ROOMS TO LET — The Club has private rooms for your business meetings, seminars, classes, lunches, or cocktail parties. The patio area is great for employee picnics or private parties. If your organization is on a tight budget (whose isn't?), note that there's no room rental fee for Sandia- or DOE-sponsored events. For more info, call 844-3808 or 255-9621.

Events Calendar

Events Calendar items are gathered from various sources. Readers should confirm times and dates of interest whenever possible.

Aug. 7 — "Classic Meets Jazz," Santa Fe Desert Chorale; 8 p.m., Sunshine Music Hall, 1-800-244-4011.

Aug. 7 & 8 — "Kegger," play dealing with issues of teenage alcohol consumption; 8 p.m., CenterStage (3211 Central NE), 260-0331.

Aug. 7 & 8 — "Grease," recounts the '50s through rose-colored memories; 8:15 p.m., Popejoy Hall, 345-6577.

Aug. 7-16 — "A Late Snow," by Jane Chambers, five women in a cabin during a snowstorm; 8 p.m. Fri.-Sat., 6 p.m. Sun.; Vortex Theatre, 247-8600.

Aug. 7-16 — Exhibit, "Thanks for the Mimbres"; 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues., 1-4 p.m. Sun.; UNM Art Museum, 277-4001.

Aug. 7-16 — Exhibit, "Our Land/Ourselves," Native American artists; 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues., 1-4 p.m. Sun.; UNM Art Museum, 277-4001.

Aug. 7-28 — Exhibit, "Native Iconographic Influences in Raymond Jonson's Painting"; 9 a.m.-4 p.m. Tues.-Fri., 5-9 p.m. Tues., 1-4 p.m. Sun.; UNM's Jonson Gallery, 277-4967.

Aug. 7-Sept. 6 — Exhibit, "Richard Ross: Museology," photographs of various areas of museum spaces throughout the world; 9 a.m.-5 p.m. Tues.-Sun., Albuquerque Museum, 243-7255.

Aug. 7-Sept. 6 — Exhibit, "Nature's Invisible World: Artist and Microstructure," crystalline structures photographed under magnification; 9 a.m.-5 p.m., New Mexico Museum of Natural History, 841-8837.

Aug. 7-Oct. 11 — "Hopi Spirits," photographs document kachina doll making; 9 a.m.-4 p.m. Mon.-Fri., 10 a.m.-4 p.m. Sat., noon-4 p.m. Sun.; Maxwell Museum of Anthropology, 277-4404.

Aug. 7-Oct. 18 — Exhibit, "Unbroken Threads: A Quincentenary Exhibition of Native American and Hispanic Art"; 9 a.m.-5 p.m. Tues.-Sun., Albuquerque Museum, 243-7255.

Aug. 7-Jan. 13 — Exhibit, "Dinosaurs, Penguins, and Whales: The Wildlife of Antarctica"; 9 a.m.-5 p.m., New Mexico Museum of Natural History, 841-8837.

Aug. 8 — Summerfest '92: Greek/Mediterranean Night, food, entertainment, arts & crafts; 5-10 p.m., free, Civic Plaza, 768-3550.

Aug. 8-9 — "America Before Columbus," play presented by Theatre-in-the-Making's Youth Performance Workshop; 2 p.m., CenterStage (3211 Central NE), 260-0331.

Aug. 9 — Arts in the Parks: Golden Era Revue, family entertainment; 2-5 p.m., free, Ridgcrest Park (Ridgcrest & Laurel Circle SE), 768-3483.

Aug. 10 — San Lorenzo Feast Day: corn dances at Acoma and Picuris pueblos; call for information, 843-7270.

Aug. 12 — Santa Clara Feast Day: buffalo, Comanche, or corn dances at Santa Clara Pueblo; call for information, 843-7270.

Aug. 13-15 — Bernalillo County 4-H Fair and Rodeo, exhibits, livestock, handicrafts; 9 a.m.-5 p.m. (rodeo at 7:30 p.m.), Tingley Coliseum, NM State Fairgrounds, 243-1386.

Aug. 14 — "The Goat in the Rug," storytelling activity for children, story about making a Navajo rug as told by the goat Geraldine, children weave small rug to take home; 9:30-11:30 a.m., Maxwell Museum of Anthropology, 277-5963.

Aug. 15 — Arts Alive!/Kids Alive!, sixth annual black-tie celebration showcasing the performing, visual, and culinary arts of Albuquerque, includes hands-on activities and music for children, benefits Magnifico! Albuquerque Festival of the Arts Scholarship Fund; 7:30-11:30 p.m., kids free, Coronado Shopping Center, 842-9918.

Aug. 15 — San Antonio Feast Day: corn dances at Laguna and Zia pueblos; call for information, 843-7270.

Aug. 15 — "Cameo: A New World Sampler," Santa Fe Desert Chorale; 8 p.m., Sunshine Music Hall, 1-800-244-4011.

Aug. 16 — Arts in the Parks: Sun Blast Reggae, family entertainment; Hoffman Park (Phoenix & Gen. Arnold NE), free, 768-3483.

Aug. 21-22, 28-29 — "McKean Street," poignant story of a boy growing up in South Philadelphia and the struggles he encounters becoming an actor, presentation of the Southwest American Playwrights Laboratory; 8 p.m., Silver Bear (6921 Montgomery NE), 881-6203.

OPSEC Awareness Week in October

Even though OPSEC (Operations Security) has been a functioning program at the Labs for a number of years, mention of it usually draws a quizzical look from some Sandians.

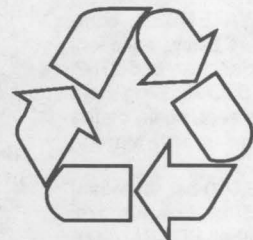
Efforts to unfurrow all those brows are under way, topped off by OPSEC Awareness Week planned for October 12 through 16. The need for OPSEC and its methods of operation will be explained in greater detail as we approach October.

For beginners, though:

- OPSEC is an organized effort to safeguard classified and sensitive operations and activities that might be susceptible to exploitation by unauthorized people or organizations.

- At Sandia, there is an OPSEC Policy Group and an OPSEC Working Group.

What do these groups do? More on that next time.



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CHECKING THE HARDWARE — Robert Martinez (left), Director of the Office of National Drug Control Policy (ONDCP), listens as Tom McConnell (5923, right) explains a display of Sandia and Los Alamos hardware during the drug official's recent visit to the Labs. Sandia's work for the ONDCP involves adapting technologies and hardware traditionally used in weapon applications and applying them to counter narcotics initiatives. Next to Martinez are Terrence Pell, ONDCP Chief of Staff, and Congressman Steve Schiff.