Sandia, UNM researchers mimic photosynthetic proteins to manipulate platinum at the nanoscale
Method has potential of changing the metal’s properties; many new applications possible

By Chris Burroughs

Sandia and University of New Mexico researchers have developed a new way of mimicking photosynthetic proteins to manipulate platinum at the nanoscale. The method has the potential of changing the metal’s properties and benefiting emerging technologies.

"While we are in the early stages of research, we see the possibility of manipulating the nanoscale structure of platinum so that we can have control over the size, porosity, composition, surface species, solubility, stability, and other functional properties of these metal nanostructures," says John Shelnutt (1141), the Sandia scientist leading the research effort. "Such control means that the redesigned platinum could be used in many new applications, including catalysis, sensors, and optoelectronic and magnetic devices."

He adds that while research groups have reported a few platinum nanostructures — including nanoparticles, nanowires, nanosheets, and others — the addition of new types of nanostructures is "highly desirable and potentially technologically important."

Working with John in the research are Frank van Swol (1834), UNM graduate student Yujiang Song, and Eulalia Pereira from the University of

(Continued on page 4)

Sandia helps JPL bring Mars rover Spirit to safe landing

By Michael Padilla

Sandia National Laboratories

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Managed by Lockheed Martin for the National Nuclear Security Administration

Sandia addressing possible leveling off of revenue, rising medical costs, pension fund issues
Contingency planning to minimize change in day-to-day operations

By Michael Padilla

Sandia management is looking at various options in planning for three trends that will eventually have an impact on Sandia’s revenues and costs. The trends include slowing federal revenue growth, increasing health care costs, and declining pension fund values.

The medical and pension issue are national trends while revenue is specific to federally funded programs such as Sandia’s business, says Frank Figueroa, VP of Business Management and CFO.

Sandia’s management is studying approaches to address these issues, and to ensure minimal change in day-to-day operation of the Labs and acknowledging the value of all employees, he says.

"It is important for us to think and plan ahead so we can position Sandia to meet our national security obligations in the future," Frank says. "We must look at numerous scenarios, consider all possible mitigation options, and make timely decisions on our courses of action."

Frank says he is comfortable that Sandia is far enough ahead in the analyses and consideration of these issues that the Labs will be able to develop appropriate mitigation options.

Revenue
The first issue is a projected leveling off of the Laboratories’ revenue for the outyears, starting in FY05. This is primarily due to the expected reduction in the growth of the NNSA budget, as stated publicly by Tom Hunter, Senior VP, Defense Programs, in his recently conducted Nuclear Weapons Management Units (SMUs)." "It is our intent to grow sufficient revenue in the latter SMUs to maintain stable funding for the Laboratories," Frank says. "We are working hard to be fiscally prudent by carefully evaluating our business projections and ensuring our staffing is commensurate with those projections. We do not want any large perturbations in our employee base."

(Continued on page 4)

3 Sandia/California team develops ultraviolet fiber-based laser

5 Labs’ elevator inspector Luis Apodaca cautious with job’s ups and downs

(Continued on page 8)

A PORTION of the first color image captured by the panoramic camera on the rover Spirit. (NASA/JPL/Cornell)
What’s what

Being a nonrunner, I do not hang around where people are running or talking about running. My occasional trips to stores that sell rubber-sole, cloth Upper shoes are defensive measures to counter the increasingly annoying effects of age and gravity, and always leave me agog at the variety on the shelves. In short, I don’t understand the nuances of running shoes versus walking shoes versus running/walking shoes, and certainly don’t know about running. Until I worked a couple of years in the Boston bureau of the Associated Press years ago, I thought marathons were something a few people ran in every four years at the Olympics.

Well, three decades on and getting a little more these days, I’m aware that a lot of people run, and that there are more marathons than you can chuck a water bottle at. I even know a few people who actually enjoy running in them, a couple of whom added to my meager file of marathon information recently. I wandered up as they were chatting away about running and listened with mostly detachment until I heard the phrase “rock and roll marathon.”

I asked what a “rock and roll marathon” is, and was informed that it’s a marathon with rock and roll bands at stages along the route playing up-tempo music to rev up the runners as they go by. Yeah, they’re great, the other runner said. They went on to describe other marathon amenities like beer breaks, people who spray runners with Ben-Gay, vats of Vasoline to plunge your hands into (I didn’t understand that one), and even a Beverly Hills marathon with champagne breaks.

Even with weefully little understanding of runners and marathons, I visualized people spraying your sore muscles with Ben-Gay, hand you shooters of beer and champagne as you trot by, vats of Vasoline (I’m still puzzled by that), and, well, maybe a dip in a fountain (despite that) — and could come up with only one thought: Who’d want to finish?

In case you didn’t notice one of the recent “found” blurbs in the Sandia Daily News, Judy Loving (2997) found and wanted to locate the owner of what she could describe only as “a frog-like thing with a loop.”

Well, the SDN editor e-mailed back, it might need a little more description: Is it maybe a key fob, or an earring, or a lapel pin? No idea, she answered, but it appears to be made of silver, if that helps.

Okay dokey, SDN responded, a silver frog-like thing with a loop it is. “And it might be a woman’s silver frog-like thing with a loop,” she e-mailed.

One final visitation of the quest for the true meaning of y’all with three pretty cute tongue-in-cheek (I think) offerings.

– Sarah Rich (1763), who was “born and raised in Louisiana,” wrote: “When you use ‘y’all’ to address one person, what you mean is, ‘You and your flesh.’”

– David Peters (1764) chimed in with: “I hate to agree with the Texan on this (in Alabama Texas is Texas, not part of the South), but she was the only one to correctly identify ‘y’all’ as solely plural.”

– And from retired director Paul Merillat: “The missenmast is aft of the mainmast.”

Howard Kercheval (844-7842, MS 0165, hckerch@sandia.gov)

Sandia LabNews

Sandia National Laboratories
http://www.sandia.gov/LabNews

Albuquerque, New Mexico 87185-0165
Livermore, California 94550-0969
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Sandia National Laboratories

Recent Patents

Murat Okandan (1749) and Paul Galambos (1769): Apparatus and Method for Transforming Living Cells.

Arlee Smith (1118) and William Allford: Optical Parametric Oscillators with Improved Beam Quality.

William Sweatt (1743) and Steven Haney (8771): Mask-to-Wafer Alignment System. (Inventors: Smith (1118), Galambos (1769), Allford, and Mark Bowers: Method to Improve Optical Parametric Oscillator Beam Quality.


Douglas Atkins (1746), Charles Andraka (6218), James Moreno (ret.), Timothy Moss (218), Kim S. Rawlinson (5714), and Steven Showalter (1764): Heat Pipe Wick with Structural Enhancement.

Paul Galambos (1769), Randy Shul (1763), and Charles Andraka: Process for Manufacture of Semipermeable Silicon Nitride Membranes.

Charles Andraka (6218), Douglas Atkins (1764), James Moreno (ret.), Kim Scott Rawlinson (5714), and Steven Showalter (1764): Exhaustive Search System and Method Using Space-Filling Curves.

Richard Kottenstette (1764), Carolyn Matzke (1141), and G.C. Frye-Mason: Microfabricated Packed Gas Chromatographic Column.

Rajen Chanchani elected IEEE Fellow

Rajen Chanchani of BEOL Advanced Packaging Dept. 1745 has been elected a Fellow of the Institute of Electrical and Electronics Engineers (IEEE). The honor recognizes his contributions to advanced packaging technologies for high-density interconnections, chip-scale packages, micro-system integration, and multi-chip modules and substrates. Each year, following a rigorous evaluation procedure, the IEEE Fellow Committee recommends a select group of recipients for one of the Institute’s most prestigious honors.

Rajen, whose PhD and MS are in material science and engineering from the University of Florida, has been at Sandia since 1990. Before that he worked five years at AT&T Bell Labs.

He has developed several new concepts in advanced micro-system packaging for use in national security applications. He has co-developed a pioneering wafer-level chip-scale packaging concept, which, according to nomination materials, has revolutionized the worldwide electronics industry. He has also developed concepts for secured and tamper-resistant electronics.

Take Note

ERA awards nominations open until Feb. 2

Here is your chance to acknowledge an individual or team whose work in support of Sandia’s mission and values has been exceptional. Last year, the Employee Recognition Awards (ERA) program had a record participation, with coworkers nominating 772 individuals and teams for significant achievements and contributions. Once again you may nominate an individual or team who has gone that extra mile.

Nominations may be submitted via the web through Feb. 2.

The ERA program commends superior results in four general categories. One category is for teams. Three categories are for individuals: technical excellence, exceptional service, and leadership. If you would like to acknowledge an individual for exceptional people skills, the Leadership Category is where you can do this.

To nominate a person or team is an easy click away. Nomination forms with detailed instructions are available from the Web at Sandia’s internal Web home page or at http://www.im-sandia.gov/04era.htm. If you are unable to personally submit your nomination electronically, contact your Division ERA coordinator, who can direct you to someone that can see you.

The primary requirement of the nomination process is to describe the nominee’s accomplishments in 250 words or less. An optional one-page supplement may be added for supporting evidence. Individual nominees must be current, regular, Sandia employees on active duty since December 2002. Team members may include nonregular employees and contractors. Any current, regular, Sandia employee may nominate individuals or teams.

Congratulations

To Sherry Ingwerson (ret.) and Ole Ingwerson, a daughter, Angela Marie, born May 6, 2003, adoption finalized Dec. 8
There are many items that can change state and federal withholdings: 

A Vacation Donation Pool does exist. The pool is made up of vacation hours that exceed 240. When an employee's vacation hours exceed 240, the employee is told they will have the option to donate their excess hours to a Vacation Donation Pool. The pool will be used to pay off the debt created by the difference between the minimum and maximum hours that employees are required to work. The difference will be paid off in the next year. 

Sandia/NRL team develops ultraviolet fiber-based laser

The researchers envision several future developments that will significantly expand the capabilities of fiber amplifiers. The team invented a method that allows the power to be scaled up by a factor of at least 100 while maintaining very high beam quality. This method involves expanding the core diameter to enable high-power operation, but the fiber will retain its original low-order modes. 

The researchers envision several future developments that will significantly expand the capabilities of fiber amplifiers. Further development of the coating technique will enable even higher optical powers. 

Sandia California News

Cluster computers coming online in California

Cluster, Lassen, is in the process of coming online in California. New Mexico has two 256-node clusters that offer this dramatic hardware upgrade, the unclassified Liberty system and the classified Freedom system. 

Sandia’s LATEST and greatest production cluster computers have been coming online recently in New Mexico and California. Using fast dual Pentium 4 Xeon processors and Myrinet memory passing hardware and software, they provide very fast capacity computing capabilities. Shown here is part of one rack of the 128-node Shasta cluster, which provides unclassified computing in California and has been outperforming the earlier but larger CPlant cluster in California since coming online Oct. 1. A 64-node classified cluster, Lassen, is in the process of coming online in California. New Mexico has two 256-node clusters that offer this dramatic hardware upgrade, the unclassified Liberty system and the classified Freedom system.

(feed photo by Bud Pelletier)
Platinum
(Continued from page 1)
Porto in Portugal.

The new method of manipulating platinum was detailed in a paper in the Journal of the American Chemical Society published in late December.

The idea for the technique is similar to photosynthesis in plants where plants use the energy from sunlight to produce sugar. But instead of making sugar, the new method changes a platinum ion to the neutral metal atom. The photosynthetic proteins do this repeatedly, allowing metal to be deposited as desired at the nanoscale.

The method involves putting porphyrins — the active part of photosynthetic proteins — along with the platinum salt in an aqueous solution of ascorbic acid at room temperature. The porphyrins are placed in specific locations in the solution where it is intended that metal should be deposited. For example, the porphyrins may be confined to micelles or liposomes. Micelles are assemblies of detergent molecules in which the heads are exposed to the water and the tails stick together in the interior. Liposomes are similar structures but they are larger and have water on the inside and outside separated by a closed membrane — sort of like a cell. A liposome is composed of two layers of detergent molecules with the heads on the inner and outer surface facing the water and the tails form the interior of the membrane.

When light is shone on the porphyrins located in these detergent structures, the porphyrins excite, becoming catalysts for platinum reduction and deposition. As this occurs, the metal grows onto the surfaces of the surfactant structures as a thin sheet or in other ways. In the case of micelles, this platinum grows into balls that look like the common toy "Koosh™" ball. The ball size can be controlled by the amount of porphyrins and platinum in the solution, the amount of light illuminating the solution, and the amount of time the light is on.

For the metals platinum and palladium that form these nanostructures, it is enough for the porphyrin molecule to grow only a small metal "seed" particle composed of about 500 atoms. When it reaches this size, the seed starts to catalyze its own rapid growth (by oxidation of ascorbic acid), budding off arms in all directions and creating the Koosh-ball-like nanostructures. The porphyrin remains attached to the platinum nanostructure as the metal grows onto the surfaces of the surfactant and the porphyrin is released. The porphyrin can be recycled into the reaction or removed from the reaction mixture. The platinum nanostructures produced look like Koosh balls. When the porphyrin is in the bilyeral membrane of a liposome, the platinum grows in 2-nanometer thick sheet on the outer surface of the membrane, giving circular sheets — sort of like two-dimensional Koosh balls.

Under solution conditions for which the liposomes aggregate, growth can occur along the interfaces between different liposomes to give platinum foam-like materials and foam nanoballs. The type of nanostructure is mainly determined by the type of surfactant assembly under which the platinum grows and the extent of growth from the individual seed nanoparticles.

Since the porphyrin remains attached to the platinum nanostructure and active in the presence of light, it can also perform other functions besides growing itself. For example when illuminated with light, the platinum nanostructure evolves hydrogen from water. This reaction is similar to some of the reactions of the photosynthetic reaction centers in plants and some other plants that are being studied to convert carbon dioxide into oxygen.

John says that in addition to structuring the platinum, the process also happens very fast. A few minutes in light will create many seeds, which then grow into the mature nanostructures in tens of minutes. And the process is easy to do.

"It's so simple it's amazing," John says.

Revenue/medical/pension concerns
(Continued from page 1)
Medical costs
The second issue is the growing medical costs sweeping the country and the world. Sandia’s health care costs are estimated to total $78.5 million in 2003. This is an increase from $72.5 million in 2002. Nationwide 2004 health care cost increases are estimated to be 12 percent to 13 percent, which marks the highest year on record. Health care costs represent a portion of fringe — the cost of Sandia’s benefits. Therefore, increases in medical costs significantly affect Sandia’s fringe rate and overall "labor wrap rate" — the effective multiplier applied to a dollar’s worth of Sandia mission labor. If medical costs and the resulting fringe rate grow faster than the rate of inflation and faster than Sandia can grow the revenue stream, then the effective labor rates increase and customers experience an increase in the price of mission labor, says Benefits Manager Becky Statler (3341).

"That could deter our customers from seeking our services and cause them to turn to other suppliers of comparable technology solutions," she says.

Sandia has already taken some actions recently to mitigate these increasing costs. These include more emphasis on preventative care approaches and increased employee share of costs. This has helped lower the cost growth at Sandia, but the Labs will need to continue to seek other ways to lower its costs in order to keep labor rates affordable, says Frank.

Becky says her organization has recently completed a thorough analysis of Sandia’s current and projected health care costs and has begun investigating strategies to contain increasing costs.

"The traditional types of strategies we may consider include health care plan design changes and employee premium-sharing changes," says Becky. "Because managed care is becoming a thing of the past and employers are trying to find other ways to contain health care costs rather than just shifting costs onto employees and retirees, various innovative advanced strategies are emerging."

The primary objectives are to maintain a healthy workforce through health promotion programs (which Sandia has had for many years), to focus on high-cost populations using disease management programs (which Sandia has also recently implemented), to manage health care costs and delivery through collective purchasing, and to promote consumer accountability.

Becky says Sandia has not completed enough of the investigations to know which of the strategies or combination of strategies we will pursue.

"The challenge will be to find ways of controlling costs while continuing to maintain a competitive benefits package," she says.

Pension outlook
The third issue is the potential need for additional contributions to the Lab’s pension plan.

"For many years now, we have not had to contribute to our pension plan because our invested pension assets have grown at a faster rate than our liabilities," says Frank. "This has happened because of our asset allocation and the favorable performance of the equity markets."

Beginning in 2000, however, the equity market soured and the value of Sandia’s assets suffered. In addition, Sandian’s pension benefits were enhanced in 2002. Along with other factors, the market decline (the analyses don’t include 2003 market performance results) has caused most companies in the country that still provide pension plans to begin having their employees contribute to their pension funds again. "Sandia is no different," Franks says.

Although we are in better shape than most, we may need to begin contributing to our pension fund by 2006 or 2007."

The effect of employer contributions to the pension plan is, like the medical cost growth issue, to hold the line on the fringe rate and over labor wrap rate.

"Estimating future pension costs is a complex problem," says Pension Fund Manager Mark Biggs (10520).

Sandia uses a Monte Carlo simulation tool to supplement its annual actuarial valuation reports and to estimate future contribution requirements. The model produces a range of possible contributions that each future year based on the input assumptions. Sandia’s pension fund developed surpluses in the past when the plans’ assets grew faster than the benefit obligations, or liabilities. However, Sandia’s modeling assumes that future growth is equal to 6.5 percent annually in the future, while the plans’ assets are expected to return about 7.1 percent per year on average.

"To keep this in perspective, Sandia will not have contributed to its pension funds for 20 years by the time of the first projected contribution, Mark says. The timing and size of any possible future pension contributions will largely be determined by the actual asset returns earned by the pension fund in the next several years, Mark says.

Further communication on what is transpiring will continue and will be published in the Sandia Daily News. The Lab News will report on major developments.
Looking up from the bottom of an elevator shaft, Luis Apodaca (10827) knows his job can be dangerous.

Much of the time Luis stands on top of an elevator car looking down into the empty, dark, and cold space. Good safety practices help him overcome his fear of heights, allowing him to inspect and service the numerous elevators throughout the Sandia complex.

"Being attentive and cautious of your surroundings is important to remember when you are working on elevators," says Luis, whose primary job is to ensure the reliability and safety of all elevators at Sandia. "You never know what could happen."

Luis has been inspecting Sandia’s elevators since 1996. There are 62 elevators at Sandia, and more are on the way due to new construction at MESA and other areas throughout the Labs. He also inspects 10 elevators at Sandia/California and has helped at the Tonopah site. His expertise is often called upon from various entities to diagnose and offer advice on their elevator problems. Luis is on call 24/7, and he is used to getting paged throughout the day for elevator "emergencies."

"Most of the emergencies are operator error," he says. "People press multiple floor buttons or try to pry open the doors before an appropriate landing level is achieved. These operator errors can cause the elevator to malfunction."

Luis says Sandia has an excellent safety record regarding elevator operations. One of Luis’ most memorable moments was when two Sandians were stuck in an elevator and the paramedics were called after receiving a report that one of the riders was claustrophobic. Soon after the paramedics arrived the elevator was reset, and the riders disembarked at their designated floor. In the meantime paramedics waited and waited on the first floor for the riders in anticipation of assisting the claustrophobic individual. After what seemed to be an eternity, the elevator arrived at the first floor. Much to their consternation, the elevator opened and it was empty. The paramedics laughed, and went on about their business.

"I work hard in making sure that elevators are safe," Luis says. Sandia has only a few older elevators, with several of them being recently reconditioned with state-of-the-art electronics.

Luis strives to maintain the elevators in a high state of readiness and keeps up with the latest technology and resources available to inspectors. He is a member of the National Association of Elevator Safety Authorities International.

Luis says there are a few rules to keep in mind when entering an elevator. He says the first is to watch your step. Second is to leave closed or closing doors alone. Don’t press multiple buttons simultaneously. If trapped inside, and doors don’t open, ring the alarm button and wait. If no response is received quickly, use the phone in the elevator to call for assistance. Most important, if there is a fire in the building, use the stairs.

"The most abused rule is that riders tend to force the doors open," Luis notes. When the normal operation of the doors is interfered with, the elevators are pushed off track or misaligned and tend to malfunction.
Feedback

Q: I just finished reading the article on the Shoes for Kids program in the December 12 edition of the Lab News, and I must admit to being not only a bit mystified, but a bit miffed as well. Frankly, I can’t afford to buy my own kids Nike shoes, even though they certainly would like to have a pair, and I certainly don’t shop for shoes at Mervyn’s for the same reason; too expensive. I understand the need these kids have, and I am hopeful that they have been “screened” to ensure that they are indeed needy. What I don’t understand is why they can’t have these shoes from Wal-Mart, Payless, or some other retailer, which would provide less expensive shoes. It seems to me that the program would get more “bang for the buck” in that manner.

Rest assured that the answer to this question would determine my decision as to whether I continue to donate to this program in years to come. I believe justification is warranted.

A: Shoes for Kids is a program that is in its 47th consecutive year here at Sandia and has evolved in many ways over the years. It is a program that con- tinues to grow as Sandia has grown, as have our employees and retirees. It is also a community part- nership between the groups that work with us to fit approximately 450 children with shoes a year. We work with Sandia’s Credit Unions Federal Credit Union and their tellers and phone personnel to collect donations in our Shoes for Kids Account. The APS Office of Student Support Services helps us to coordinate with the schools we work with each year. They know which schools have a need. Within the schools, the counselors choose 25 students to receive the shoes. The counselors know the children and their status. This program serves some very dis- advantaged children and we trust the schools to choose those who will benefit most. We have bus companies that transport the children to the shoe store as a public service. Over the years, we have taken the children to many stores. In 1999, when Kinney Shoes went out of business, we had to find a new shoe partner.

Part of our philosophy has always been to provide disadvantaged children with an experi- ence that was very meaningful to them. It is important that they get fitted properly and for that we try to fit them in stores where they can learn how to fit children. We want them to have the benefit of getting a shoe that fits them and is of sufficient quality to last them a long time. We also had to look at logistics of how to get the kids to the store, fitted and back to school in a reasonable period of time. We checked with many shoe stores and decided to work with Mervyn’s based on the following reasons: They have all sizes in one location as we work with children of all sizes, they have an inventory that is large enough to provide a good selection of shoes, they have a staff of at least three that dedicate themselves to working with the children, they provide us with shoes at the sales price plus a discount each time. We went to Mervyn’s to fit children’s shoes, last year our average shoe price was under $25 and we were able to fit 450 students. As we introduce our- selves and explain the program at the store we give them a spending limit. They are good at being real- istic. Many Sandians volunteer their time to help fit the students and I would recommend it to any- one who wants to help others. I understand that this does not mean that there is not a need for different shoes at Wal-Mart, Payless and other stores.

Q: I would like to know what I can do about an individual on a bicycle who shows no regard for traffic and motorists. He enters the Euwbahn gate at about 6:30 a.m., weaves all through traffic, takes up a lane where there is a bike lane present and threatens people in their cars as he is breaking all the rules. The cars and motorists have been very courteous to him but his threatening actions and obscene gestures are going to prompt extreme indiscipline and possible aggressive actions. He disobeys all traffic rules and puts us at risk and we should not have to tolerate this. Please advise.

A: Wow, what a frustrating way to start your day. I would like to personally thank you and the other drivers for extending your courtesies to this individual who so blatantly offender your sense of justice. There are times when being polite is foolish. We need to hold people accountable as the Sandia Security is in the process of establishing a recorded file where Sandians can report activities that are of security concern. When this line is established the phone number will be announced in the Sandia Daily News.

— Ed Williams (10864) and Dennis Miyoshi (4200)
I have a question pertaining to the amount of Operations Department (9616) that operates Web
sive CQuest collection. saw Web FileShare as another way to access the mas-
CQuest to continue to operate with high-resolution pictures
CQuest photos to be available on Web FileShare

Mars rover
(Continued from page 1)

“If the need arises, NASA can make changes in the software, landing site, entry trajectory
angle, parachute deployment time, and several

other flight parameters,” says Carl, who helped
analyze the data at JPL as it came in.
The Red Team has continued to analyze the
data for possible adjustments, and Carl will be
back at JPL for the second landing.

Carl says the airbags used to cushion the
impact of current Mars Rovers have been
improved by NASA and its contractor since their
first deployment on Pathfinder. “The airbags now
are a world apart from the prototype Pathfinder
airbags that Sandia designed because of the work
done by JPL and their contractor,” he says.

CQuest photos to be available on Web FileShare
CQuest to continue to operate with high-resolution pictures

In the near future Sandians will have a new way
to access the thousands of pictures of Sandia and
Sandians taken over the years, including historical
subjects and the latest research.
For the past ten years these photos and graphic
images have been stored on CQuest, Sandia’s pri-
mary on-line photo storage system managed by
Russell Smith (9620). These photos have been put
on Web FileShare, a four-year-old web-based infor-
mation management system. Until recently Web File-
Share was primarily used to store program and
project business information. Now, in addition, it
mirrors the 25,000-plus pictures that reside on
CQuest.
CQuest will continue to be updated and avail-
able to users. As images are added to CQuest, Web
FileShare will be updated at least biweekly.
“CQuest uses its own browser. It and Web File-
Share exist parallel to each other,” Russell says. “We
saw Web Fileshare as another way to access the mas-
CQuest collection.”
Russell partnered with the Technical Library
Operations Department (9616) that operates Web
FileShare and the Computer Support Special Projects
Unit (9623) to move the collection to Web File-
Share. This significant effort spanned a period of
some 18 months.
Photos on Web FileShare will be low-to-
medium-resolution. The low-resolution pictures will
be one by two inches at 72 dpi. Medium resolution
pictures will be 8 by 10 inches at 72 dpi.

The low and medium resolution will be perfect
for people needing pictures for web sites and Power
Point presentations,” Russell says. “However, people
wanting high-resolution pictures for brochures and
other publications can still get them from CQuest.”

Anyone who has an account on the Sandia
Restricted Network (SRN) can access both Web File-
Share and CQuest. Information about how to get to
Web FileShare and the CQuest photos can be found
The official rollout of CQuest pictures on Web
FileShare will come in February, complete with
demonstrations of the system at the Bldg. 810 audi-
torium video-linked to California. Dates for the
demonstrations will be announced later through

Pictures will be used

Beth Moser (9616), who operates Web FileShare, says she anticipates the CQuest pictures
on Web FileShare will become very popular.

“It will bring images to a new audi-
ence,” she says. “It’s one more way for peo-
dle to discover the pictures from this valu-
able collection.”

Web FileShare is already well used. The number of people who log on every month
is about 3,300 making about 160,000 hits.
That compares to 3,500 hits a month when the
system was about six months old.

Robots to the Rescue

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A 360-DEGREE PANORAMIC VIEW of the Martian surface, taken on Mars by the Mars Exploration Rover Spirit’s panoramic camera. Part of the spacecraft can be seen in the lower
corner regions. Sandian Carl Peterson worked with JPL on the parachutes that slowed the spacecraft.

Plaque dedicated to Pat Eicker

ROBOTICS VISIONARY — Executive VP Joan Woodard and Pat Eicker (ret.), former Director of Intelligent Systems and Robotics Center, unveil a plaque in Pat’s honor recently at the Robotics building. The bronze plaque, which features a picture of Pat, was dedicated to recognize his contribution to Sandia in the area of robotics.

“No decades Pat has held a vision that robotics in many forms, materials, sizes, and complex-
ity would shape 21st century manufacturing, hazardous operations, and repetitive job operations. To help others see the vision Pat has researched, lectured, listened, coordinated, preached, pushed, directed, man-
aged, led, and even cajoled the diverse academic, industrial, military, and national labs to share that vision,” Joan said.

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corner regions. Sandian Carl Peterson worked with JPL on the parachutes that slowed the spacecraft.

Plaque dedicated to Pat Eicker

ROBOTICS VISIONARY — Executive VP Joan Woodard and Pat Eicker (ret.), former Director of Intelligent Systems and Robotics Center, unveil a plaque in Pat’s honor recently at the Robotics building. The bronze plaque, which features a picture of Pat, was dedicated to recognize his contribution to Sandia in the area of robotics.

“No decades Pat has held a vision that robotics in many forms, materials, sizes, and complex-
ity would shape 21st century manufacturing, hazardous operations, and repetitive job operations. To help others see the vision Pat has researched, lectured, listened, coordinated, preached, pushed, directed, man-
aged, led, and even cajoled the diverse academic, industrial, military, and national labs to share that vision,” Joan said.

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