

STB News

May 2004

Meyer: Strategic Planning Essential for STB's Future

Thomas J. Meyer stressed the importance of strategic planning in his introductory meeting with employees of Science and Technology Base Programs May 26.

Don Rej, acting director of STB, arranged for a bus to take STB employees from Canyon to the 8:45 a.m. meeting, held at the J. Robert Oppenheimer Study Center. Employees of the Research Library joined Canyon employees in the center's upstairs meeting room. Rej noted that the meeting was, perhaps, the very first at which all employees of STB had come together in one large room. "I'm glad we're together," he said.

Effective June 1, STB will be under the authority of Meyer, the Laboratory associate director for strategic research. William H. Press, former Laboratory deputy director for science and technology (and, in the past, the person who had managerial authority over STB), is returning to research as a Senior Fellow in the Decision Applications Division. Laboratory Director G. Peter Nanos plans to abolish the deputy director position that Press held, establishing a chief science officer position instead.

Meyer opened his remarks by commenting that many of the tasks STB carries out are important and valuable.

He cited two examples to illustrate the value of STB's work in education.

He said that during a May 24 groundbreaking ceremony for the new Center for Integrated Nanotechnologies, he spoke with Raymond L. Orbach, director of the Department of Energy (DOE) Office of Science, and found that Orbach, a former physics professor and University of California chancellor, "has really fond memories of coming out here and visiting the local schools."

Meyer added that his own wife, a former sixth-grade teacher, still speaks of the value of a Laboratory training program on teaching mathematics.

Meyer said he sees his management of STB as a "very, very positive" development.



Thomas J. Meyer, associate director for strategic research, speaks at a May 24 STB all-hands meeting.

He added, however, that "The Lab is a place that continues to evolve," and within that context, he said, strategic planning "is of great value."

STB will begin work on its new strategic plan in June, and, Meyer said, he wants employees to look at the organization and remember the underlying reasons for its existence: service to Laboratory science and technology and the creation of a "positive impact on the state of New Mexico."

STB employees as a group must come together, look at what the organization is now, determine how to make it better, and consider its interfaces, he said. Once those steps have been taken, STB must "immediately look at implementation strategy." "I think this will be a very healthy exercise," Meyer said.

"We need to look at the LDRD (Laboratory Directed Research and Development) program relatively quickly," he said. In the larger context of

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the Laboratory, he explained, a strategic-initiatives program coming soon will create a huge focus on the management of science. "These strategic initiatives will touch everybody's lives," he said. "We will in no way compromise quality science," he said, but it must align with the Laboratory's strategic directions.

Meyer's directorate includes the Chemistry Division, the Earth and Environmental Sciences Division, the Materials Science and Technology Division, the Technology Transfer Division, the Theoretical Division, and the Office of Energy and Environment Initiatives. For this reason, he noted, he wears two hats in the LDRD funding competition. He said, however, "I think we'll be able to work through these details of apparent conflict of interest."

He noted that the creation of a chief science officer who reports to the Senior Executive Team (SET) and the Director is a "great idea." He said he will be glad to have someone at SET meetings "shouting for science" besides himself.

What to Expect

He asked rhetorically, "What should you expect from me?" He listed three qualities: He said he has valuable connections with the SET and Congress, and, as a result, he can serve as a broker to the outside world for STB. He said he has a solid background in education and can provide new ideas for STB. And, as the person providing managerial oversight, he will "sit in the room with those leading the effort (at STB) and throw darts and ask hard questions."

When he looks at the STB staff, he said, "I see a bunch of really hard-working people who are really interested in what they do." He urged employees, however, to "remember that this is a service organization" and focus completely on helping others to get their work done. He also mentioned the importance of behaving as professionals and avoiding internal wars. "We're all in this together," he said.

He closed his presentation by listing the following 11 "leadership guidelines":

- Think of the institution. Remember that we are in this together.
- Exert leadership; instead of whining, do something constructive.
- Integrate; communicate.
- Avoid the "bird in a nest" syndrome. (Don't just sit in the nest and chirp for food.)
- If things are not working out, consider the possibility that you may be in the wrong place.
- Remember that we still may have some distance to go, but things are improving.
- Look at the long term and the big picture.
- Leave nothing to chance; manage everything.
- Install, implement, and utilize chains of command.

- Watch out for trouble. When it appears, notify the chain of command.
- Enjoy yourself. (You could be in another place that is far worse.)

Meyer took a moment during his talk to speak highly of Press. He said Laboratory employees should appreciate the good work Press did during his five years as deputy director.

Several points emerged during the question-and-answer session that followed Meyer's presentation.

Rej asked about "keeping us whole, letting us get a plan together before being dissected." He also asked about advocacy for STB at the SET and the role of the new chief science officer.

Meyer said, "Until you guys sit down and strategize, nobody's going to do anything." He added that he "can't imagine" that too many changes will be made because, "You serve a function and do it well." He said he believes the new chief science officer will be "a mouthpiece into the SET."

In response to a question about shrinking budgets, Meyer said there is a "big push" to cut the cost of doing business as much as possible. The Director has already produced great savings, he said, and his initiative "makes you stop and look at what's important." Meyer predicted that the budget won't grow and may shrink for the next few years. He believes that the general and administrative budget may be cut by another 2 to 3 percent over the next year. He said, however, "You've got a story to tell. It's never been told. You've got to market this organization and justify to everybody across the Lab that you're of value."

Asked about DOE education plans, Meyer said he expects a major announcement in mid-June that could mean a couple of new programs. It's important to pursue educational issues from the point of view of the nation's personnel needs, he said.

Asked about the future of STB-Foreign Travel, Meyer said he isn't sure that Foreign Travel should be in STB, but its function is important.

He closed by repeating, "Having a plan, knowing where you're going, is absolutely critical." He commented, "You do it well, and you're in." It's essential, he noted, that the institution be able to benchmark.

Resources Added

Rej spoke briefly at the close of the meeting, introducing Lynne Richards, who will be facilitating the STB strategic planning process. He also commented that he has asked for and received more resources to cover the cost of strategic planning and that, "The library is buying books again." STB will develop an action plan, write a proposal for work, and get the resources needed, he said. The plan will be concluded no later than September.

Those attending then stepped outside onto the Study Center veranda, and a Laboratory photographer took a group picture.



Don Rey, acting leader of STB

Rej Reflects on First Few Days at STB

Two weeks and three days into his tenure as acting leader of Science and Technology Base Programs (STB), Don Rej took a few moments for an interview on May 19.

STB Employees Are Dedicated

"I really enjoy the people," he said, commenting that he sees STB's employees as "dedicated, talented, committed." He added, "I just look forward to knowing them more." He said they seem to have a "personal commitment to doing a good job."

Rej had recently returned from trips to Sandia National Laboratory and Oak Ridge National Laboratory, where he had an opportunity to compare STB with equivalent operations. He said he had also talked to people familiar with comparable operations at Lawrence Berkeley National Laboratory, Brookhaven National Laboratory, and Argonne National Laboratory. "The idea," he said, "is to benchmark how these functions are organized and compare."

So far, he said, it appears that STB is "really quite special." "In some areas," he added, "it's becoming evident to me that we are the best in class."

Rej spoke of his three focus areas over his first month: initiation of the STB strategic planning process; interviews of STB clients and stakeholders at LANL; and benchmarking of STB efforts at the other DOE labs.

He noted that LANL Office of Organizational Development, led by Lynne Richards, will be assisting him in this three-step approach, and, he said she is in the process of interviewing 40% of the STB staff.

This Division Enables LANL's Future

His viewpoint on the importance of STB, he said, is that, "We enable the Laboratory future—in people, programs, and knowledge. We are expected to assure quality and integration of science and technology throughout the Laboratory."

Asked about STB's budget, Rej said, "Right now, our budget is known—at least for the rest of this fiscal year. With everyone's attention to performance at cost, we *will* balance ... It looks like we're going to be OK, but we need to analyze and trend our performance vigilantly each month."

All of these issues came up for discussion when Rej held his first "brown-bag" meeting with employees on May 4. Rej said the informal meeting was a "good start." He plans to hold future brown-bag meetings, but he may vary the location and change the time to keep them interesting.

Rej also commented on the departure of Laboratory Deputy Director for Science and Technology William H. Press and STB's shift to the directorate of Thomas J. Meyer, the Laboratory's associate director for strategic research. "Bill Press wanted to return to research," Rej said. "It was something he was planning on doing." Rej thanked Meyer for "taking us on for now" and for wanting to meet with STB employees so promptly. (A story on Meyer's May 26 meeting with employees appears on page 1 in this issue.)

Rej's Background Is in Physics, Management

Rej provided a curriculum vitae that revealed considerable detail about his background—an issue of interest and importance for STB employees.

He has a bachelor's degree in physics from Rensselaer Polytechnic Institute in Troy, N.Y., and master's and doctoral degrees in applied physics from Cornell University in Ithaca, N.Y.

From 1992 through 1996, he held progressively higher management positions in the Laboratory's Physics Division; from 1996 until 1999, he served as deputy director of the division; and in 1999 and 2000, he served as acting director.

He was leader of the Laboratory's Spallation Neutron Source Division from 2000 through 2004.

He has more than 60 peer-reviewed publications and two patents to his credit.

He has been a member of the American Physical Society since 1975.

And he has received a number of professional honors including a Distinguished Performance Award at the Laboratory (in 1991), an R&D 100 Award (in 1997), and a DOE Defense Programs Award of Excellence (in 2000).



Terry Lowe, acting director of STB-UR, has extensive experience in several fields.

Lowe Has Busy and Varied Background

Terry Lowe, the new acting director of Science and Technology Base Programs-University Relations (STB-UR), has a background heavy in science, management, teaching, and entrepreneurial experience.

He holds a bachelor's degree in mechanical engineering/materials science from the University of California-Davis, and master's and doctoral degrees in materials science and engineering from Stanford University.

His professional background can be divided into several periods.

- He worked first as an engineer. In 1976 and 1977, he was a mechanical engineer at IBM General Products Division in San Jose, Calif., and in the summer of 1978, he was an acoustical engineer at Unique Functional Products Inc., in San Marcos, Calif.
- He turned next to teaching and research at various universities. In 1980 and 1981, he was a lecturer in the Division of Engineering at San Francisco State University; in 1979 and 1982, he was a research assistant at Stanford; from 1983 to 1986, he was a visiting scholar at Stanford; and in 1988, he was a visiting scientist at Brown University in Providence, R.I.
- The third phase in his life gave him considerable experience in national laboratories. From 1982 to 1990, he was a senior member of the technical staff in the Materials and Processes Division and the Tritium Effects Research Division at Sandia National Laboratories in Livermore, Calif. Then he was recruited by Materials Science and Technology Division Leader Paul Follansbee to come to Los Alamos National Laboratory (LANL), where he served as a group leader in the Materials Research and

Processing Science Group from 1990 to 1996, and as deputy division leader from 1996 to 2000.

- In 2000, his entrepreneurial interests came to the fore, and he left Los Alamos to enter the private sector to lead the growth of several companies in the emerging nanotechnology industry. He was chief executive officer and president of Technanogy, LLC, headquartered in Newport Beach, Calif., in 2000 and 2001, and chief executive officer and president of Metallicum, LLC, in Santa Fe in 2001 and 2002. Technanogy, he said, was the world's first and largest nanotechnology incubator. He was recruited to be CEO of the company and was trained and coached there in the skills of executive leadership. He has a major interest in nanotechnology, and continues to be a sought-after speaker, advisor, and educator in this growing field. He serves on multiple National Research Council and professional technical boards and committees as a subject-matter expert in nanoscale science. As a result, he brings to STB both leadership and management skills.
- But LANL and his family drew him back to Los Alamos. From 2002 until 2004, he was leader of special projects for LANL's Prime Contract Office.
- He was—and is—also an adjunct professor in materials science and engineering at both New Mexico Institute of Mining and Technology in Socorro, N.M., and at Clemson University in Clemson, S.C., advising and teaching at both institutions in the field of nanomaterials.

Asked what attracted him to STB, his first response was “the opportunity to reinforce the strengths of the science at this institution.” He added, “I think of myself more as a leader executive than as a scientist.” He is attracted, he said, to change and growth. In addition, he said, “Don Rej's in charge here.” He has worked with Rej before, and he liked what he saw.

Asked about his goals, he said, “For the division as a whole: We intend to look deeply at this organization and its alignment with the institutional strategic goals. I'm looking forward to supporting Don Rej in that process. I'm hoping we will develop together an exciting and compelling vision and execute it with great skill and effectiveness.”

Despite an extraordinarily busy professional life, Lowe also has a home life. He is married and has three children—and he is a performing jazz musician, playing jazz piano at Santa Fe restaurants and night spots. For a while, he said, he had wandered away from music, but then his son, now 15, got interested and pulled him back to yet another love in his life. Before beginning his technical career, he was a professional musician, playing with jazz greats, including Clark Terry, Dizzie Gillespie, and Chuck Mangione.

Panels Project Shows Off the Best in LANL Science

On behalf of Science and Technology Base Programs (STB) and *Los Alamos Science*, Ileana Buican, project leader for the science panel display in the Administration Building, recently led a large team of technical staff, writer-editors, and graphic artists to create 40 new panels.

In a May 24 interview, she said, "We are going to have an opening for the new panel exhibit on June 3 in the east hallway of the Administration Building at 11:30 a.m."

Thomas J. Meyer, Laboratory associate director for strategic research, will be the host for the opening, and Don Rej, STB acting director, will introduce some of his own ideas on how the panels might be used.

Buican said that the sponsoring divisions, the technical staff members whose work is being highlighted in the exhibit, the Laboratory's upper management, the management of STB, and the editors and graphic artists who helped produce the panels will receive invitations to attend the opening.

The panels "highlight new, significant technical achievements at the Laboratory," Buican said. They are among the first things high-level visitors see when they come to meet with the Laboratory Director. She added, "These panels are sometimes requested by Department of Energy Headquarters" as well.

"Divisions take turns in being represented," Buican said. The eight divisions that will have new panels posted this year are the Computer and Computational Sciences Division; the Earth and Environmental Sciences Division; the Engineering Sciences and Applications Division; the Health, Safety, and Radiation Protection Division; the Los Alamos Neutron Science Center; the Materials Science and Technology Division; the Nuclear Materials Technology Division; and the Physics Division. In addition, Buican's team produced a set of three panels on pit manufacturing.

Each division selected the topics it wanted to present, but as team leader and STB representative, Buican assisted in the decision-making process. She noted that the subsequent work involved "a collaborative process among the technical divisions, STB, and Communication Arts and Services (IM-1)." Subia, an Albuquerque firm, printed the 48-inch by 19.5-inch full-color panels. "The panels tell

stories of technical achievements. I think they will impress the passerby with the breadth of the science conducted at the Laboratory," she said.

This year, for the first time, each of the panels will also be posted on a Laboratory website and made available to both internal and external audiences.

Stephen Schultz of STB-Laboratory Directed Research and Development will handle the web posting. Charmian Schaller, an IM-1 writer-editor stationed in STB, assisted in the writing and editing of six panels.

And what about the old panels that are coming down? Buican said that they are often displayed near division offices, as well as in other parts of the Laboratory such as the J. Robert Oppenheimer Study Center, the Bradbury Science Museum, and the Otowi Building.

Mindy Is Leaving....



Mindy Mendez, a staff member for about four years in the Education Program Office, will be leaving soon. She has accepted a post effective June 7 as an administrative operations specialist in the Facility and Waste Operations Division.

Know Your Colleagues



Jenna Montoya, Cheyenne Casados, and Sylvia Trujillo,

Student Employees at RL Discuss Work & the Future

Three young women from northern New Mexico—Jenna Montoya, Sylvia Trujillo, and Cheyenne Casados—are getting an inside view of the Research Library this year as student employees.

In a recent group interview, they talked about school, the future, and their work at the library.

Montoya, a 2003 graduate of Pojoaque High School, works at the Research Library all day on Tuesdays and Thursdays, and puts in another half day on Fridays. She has worked at the library for about two months.

She will be starting her second year this fall at Northern New Mexico Community College. At present, she said, “I’m just getting my basics”—and thinking about what she might like to do in the future. She is considering attending Santa Fe Community College.

She is engaged to Herman Garcia, a mechanic in Española. They plan to be married next year.

She is interested in pursuing a career at Los Alamos National Laboratory, she said, and the Research Library is a good place to work while she decides what to do. “It’s interesting,” she said. “It’s a good thing to learn. You meet other students.” And, she added, it’s fun.

Trujillo, a senior at Española Valley High School, has been working half days at the Research Library for almost a year as part of the High School Co-operative Program. She attends classes in the mornings and works at the library in the afternoons.

She has been accepted as a student at the University of New Mexico (UNM) in Albuquerque

and plans to start her college career this year.

Asked what she might choose as a major, she said, “Something in computers. I was thinking (about) information technology.” She hopes to return to the Laboratory as a full-time employee when she completes her degree. “We’ll see how it goes,” she said, but she agreed that expertise in computers fits well in many places.

For now, she said, she enjoys working at the Research Library because she is “getting to know people.” She said that she is “having a good time” as an employee.

Casados, a Navajo who lives in Española, will complete her second year at the Research Library this fall. She started work at the library as a participant in the High School Co-operative Program before she graduated from Pojoaque High School. She plans to be a sophomore at UNM-Los Alamos in the fall. Right now, she is taking 15 credit hours, attending the university from 8 a.m. to 10 a.m. on Mondays, Tuesdays, Wednesdays, and Thursdays, and taking evening classes on Mondays and Wednesdays. She fits her work schedule around her classes.

Asked about her plans for the future, she said, “I’m going to go into education—probably primary (education).” Her mother is a school principal, and she hopes to be able to work with her someday, “probably in a Native American school,” she said.

Asked to comment on her work at the Research Library, she said, “I think it’s a learning experience.” She values the opportunity she is getting to see what it is like to be part of the workforce.

All three students spend time shelving, scanning, using computers, and checking books in and out. They spend considerable time e-mailing material to library customers, but for the most part, they see the public only when they are shelving.

Asked her view of the international move toward computerizing libraries, Casados said, “It’s easier.” The digital library makes it possible, she noted, for readers to get articles by using the Internet, and it reduces the time spent on shelving.

Is the job what the students expected? Casados said, “They keep adding things.” For example, all three students are part of the “Adopt a Shelf” program. Each of them is assigned 12 shelves to dust, straighten, and “read” to make sure materials are not out of place.

They showed off “their” shelves proudly, noting how straight, clean, and orderly they were compared to others that had not been checked recently.



Henry Jerez, seated, Xiaoming Liu, standing at left, and Jeroen Bekaert, standing at right, sometimes resort to writing on a window when space on their white boards runs out.

Research on Digital Libraries Has an International Flavor

Three advanced students working at the Research Library this year demonstrate just how international today's graduate study and the concept of the digital library have become.

- Jeroen Bekaert, 25, a graduate student, is from Ghent in the province of Flanders, Belgium. His first language is Dutch, but he learned English in school.
- Henry Jerez, 26, also a graduate student, is from Bolivia. His first language is Spanish, but his English is excellent, and he said he has had no problems communicating in the United States. He noted that the Spanish in New Mexico is "quite old" and that Spanish speakers in New Mexico have an accent that is very different from the Spanish in his native land.
- Xiaoming Liu, 31, a postdoctoral employee, is from Shandong in China. His first language is Chinese. His experience with English began with classes in China that emphasized reading and writing.

They use English to converse with each other—and with Herbert Van de Sompel, team leader of the Digital Library Research and Prototyping Team at the Research Library. (Van de Sompel is an internationally known figure in development of digital library systems. He holds master's degrees in mathematics and computer science and a doctorate in communication science from Ghent University in Belgium.)

Asked the library meaning of the word "prototyping," Bekaert explained, "We are *prototyping* the new (digital library) architecture." And Jerez added, "We get to look at all the new ideas."

Bekaert said he has been in the United States since March 2003. All of his work during that time has been at the Research Library. He holds a master's degree in engineering from Ghent University, where his major was architecture. He said he is still defining the exact topic for his Ph.D. research, but it will probably involve the digital

library and digital archiving based on MPEG-21 technology. MPEG-21 was developed by the "Moving Picture Experts Group," a committee of the International Standards Organization in library science.

The work in which he is involved, Bekaert said, makes use of new technologies and Van de Sompel's open-archives protocol. Such work will enable knowledge exchanges in the future. Bekaert knew Van de Sompel and had talked with him about their mutual research interests before he came to Los Alamos. Eventually, he will return to Ghent to defend his research. He commented that, "Los Alamos is one of the best areas to be when doing research of this type."

Bekaert said his work is "going pretty well," although it has its "ups and downs." Asked to comment on his experience at the Research Library, he said, "Amazing work; amazing people. No complaints."

In response to gentle teasing from his married colleagues, Bekaert acknowledged that his Belgian girlfriend has been to Los Alamos to visit him several times.

Jerez has been in the United States for more than three years now. He holds a master's degree in computer engineering from the University of New Mexico (UNM), and he is finishing his second year at the Laboratory. If all goes as planned, he will finish his Ph.D. research next year and defend it at UNM. Last year, he received the "outstanding graduate student award" from the UNM School of Engineering. This year, he was awarded the "outstanding student service award" from the Electrical and Computer Engineering Department.

Asked about his work, he said, "We are all part of the Prototyping Team," which is working on completion of a new repository architecture. He said his work and the work of Bekaert and Liu overlaps, and there is "good synergy." "The group's got pretty sharp people," he said. "It's an honor to say you're part of it."

Once he has completed his Ph.D., he hopes to stay in the U.S. and "work in the industry."

Jerez is married and has two sons, ages 2 and 5. He said his wife is studying engineering. The family lives in Albuquerque. He drives to Los Alamos three times a week and works from Albuquerque the other two days. Asked about the construction he must navigate when he commutes, he said the road is "improving," but he acknowledged, "It can get pretty bad sometimes...."

Liu has been in the U.S. for five and a half years. He has spent approximately one year in Los Alamos. He holds a doctoral degree in computer science from Old Dominion University in Virginia. He said he knew while he was working on his doctorate that he was especially interested in information retrieval. (Bekaert commented that Liu is published and "well known in that area.")

Liu held an internship at the Laboratory for five months in 2000 and 2001. He subsequently returned to accept a postdoctoral contract that ends in March 2005. Asked if he has had a good experience in Los Alamos, he said yes.

In response to questions, Liu confirmed that China has large libraries and that the Chinese are starting to use digital library technology. (Van de Sompel's work will help libraries in different countries share information more easily.)

Liu is married, and his wife, Susu Shi, is in accounting. They live in Los Alamos.

First Steps Toward a Life in Science and Technology

Several Los Alamos National Laboratory employees spent May 25 at Walatowa High Charter School in the Jemez, teaching a class in robotics. The underlying reason for such classes is to encourage students to stay in school, learn more mathematics and science, and consider choosing a technical profession. At right, Kurt Moore, ISR-1, founder of Jemez Educational Technologies (JET), makes a point to the class, standing in front of a board that lays out safety rules and the goals of the workshop. Below, a student sets out parts to make sure she has everything she needs. At right, Alfred Hernandez, ISR-2, a partner in JET, helps a student learn to solder. Below left, students read the directions. And below right, a student begins work on assembling a “popper.”

Photos by Charmian Schaller

