



An Informal Proceedings of
the First Technology Transfer/
Communications Conference

May 19-21, 1992

Pacific Northwest Laboratory

Richland, Washington

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Tech Transfer Outreach!

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Transfer/Communications Conference**

**May 19-21, 1992
Pacific Northwest Laboratory
Richland, Washington**

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May 15, 1992

Battelle's Pacific Northwest Division

Volume 29, Issue 19

PNL hosts innovative technology transfer conference

Improving the transfer and application of government-funded research and development has received increasing emphasis in recent years as signs of eroding U.S. industrial competitiveness have become evident. Secretary James Watkins also has made technology transfer one of the key initiatives for the Department of Energy.

In an effort to move technology laboratories and a Laboratory will host a Communications/Tech Conference, May

Technology communications representatives from national laboratory offices will spend

ing the most effective methods to improve and speed up the transfer and commercialization of technology.

Co-hosted by Don Williams, Technology Transfer director, and Gary Petersen, Communications director, the conference will include presentations and small working groups focused on various topics,

which begins at 8:30 a.m. in the Battelle Auditorium.

Conference attendees include representatives from DOE-HQ; DOE, Richland Field Office; DOE, Chicago Field Office, DOE, Area Office, Golden, Colorado; DOE Defense Programs Office of Technology Transfer Outreach Department; Argonne National Laboratory;

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Tri-City Herald

Technology transfer a long-term challenge

By CHRIS SIVULA
Herald staff writer

Despite some successes, it will be awhile before technology transfer catches on at federal laboratories, a Department of Energy official said Wednesday.

"If I could wave a magic wand, everyone at DOE and the contractors would understand what we need to make this work," said Cherri Langenfeld, DOE's director of technology utilization.

Langenfeld is in Richland for the first DOE communications and technology transfer conference. The meeting brought together the heads of public relations and technology transfer divisions from nine national labs and various DOE field sites.

Participants are discussing communications strategies, products and ways to speed the transfer of federally developed technology to private industry. It's Langenfeld's job to coordinate that activity throughout the DOE complex.

She's the department's first di-

rector of technology utilization. The division was created about 18 months ago. It will be another 18 months before some kind of unified front becomes ingrained at DOE, she said.

About 23,000 scientists and engineers work at DOE laboratories. Their research is funded to the tune of \$6 billion a year. Overall, the federal government funds approximately half of all research and development in the United States.

Taxpayers ought to be getting more for their investment, according to Langenfeld. Much of the technology developed in the federal labs could be used by industry.

Sometime the transfer is easy. The market for the new technology is obvious and someone moves into commercialize it right away, she said. DOE issued about 90 licences for new technology to private businesses in 1991.

Often, the process is complicated because the labs tend to be 15 years ahead of private industry. Finding matches for such esoteric

technology isn't simple, she said.

For example, the process control systems for nuclear weapons production have the ability to manufacture components to extremely tight tolerances. Those systems are old to the Energy Department, but businesses are only now recognizing ways they can be adapted to other manufacturing plants, Langenfeld said.

She said there's a need to tweak technology transfer - streamlining some procedures and making databases listing federal research projects more accessible to businesses.

"That's solvable. It doesn't involve getting into people's heads," Langenfeld added.

What's more difficult is getting researchers at the lab to recognize the benefits of sharing their findings. "Many people see it as intrusive," Langenfeld said.

She sees such attitudes as her program's main obstacle. "Changing people is hard," she said.

Preface

Pacific Northwest Laboratory is proud to have led this conference, a historic "first." It marked the first time that Communications and Technology Transfer staff from all the Department of Energy's multiprogram laboratories met to talk about technology transfer communications. It provided a unique opportunity to strengthen communication and outreach activities in support of the technology transfer mission.

Our key DOE contacts, Cherri Langenfeld from the Office of Technology Utilization and Barry Daniel from Public Affairs, joined staff from several of the DOE field offices to participate in the discussions. Their active participation allowed the conference to proceed in a spirit of unity and cooperation.

Together, we talked about many issues: How the research and development going on at the national laboratories will enhance the nation's competitiveness in the global marketplace; the importance of communications in the technology transfer process; the need for stronger communication and understanding between DOE and its laboratories, between DOE and the other federal agencies involved in technology transfer, and among the laboratories themselves--that is, among us; and the various ways in which we could combine our efforts for more effective technology transfer outreach at trade shows and through televised or printed communications.

Now, it is up to us to turn our talk into reality. Through broad technology transfer programs and a variety of contractual mechanisms, we are beginning to work with industry "up front," tailoring our technologies to meet industry's needs. But in order for technology transfer to work, effective outreach and communication must take place. Together, we need to tell our story, to spread the news about the immense technical resources within the national laboratory system and the means by which the nation can benefit from them.

We are committed to this mission. As Admiral Watkins has often stated, the scientists and engineers at the DOE labs are truly a national treasure in terms of capabilities and achievements. As an outgrowth of this conference, we will work together to ensure that these resources are used effectively to strengthen the economic competitiveness of U.S. industry, to protect our environment, and to enhance our quality of life.


L. Don Williams, Director
PNL Technology Transfer

Foreword

This document provides an informal summary of the conference workshop sessions. "Tech Transfer Outreach!" was originally designed as an opportunity for national laboratory communications and technology transfer staff to become better acquainted and to discuss matters of mutual interest. When DOE field office personnel asked if they could attend, and then when one of our keynote speakers became a participant in the discussions, the actual event grew in importance. The conference participants--the laboratories and DOE representatives from across the nation--worked to brainstorm ideas. Their objective: identify ways to cooperate for effective (and cost-effective) technology transfer outreach. Thus, this proceedings is truly a product of ten national laboratories and DOE, working together. It candidly presents the discussion of issues and the ideas generated by each working group. The issues and recommendations are a consensus of their views.

Sue Liebetrau
Sue Liebetrau
Editor



"I want to provide a service to all of you to help you succeed." [Cherri Langenfeld, Director, DOE's Office of Technology Utilization]

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Background

How it Came to Be

At the Pacific Northwest Laboratory, the Communications and Technology Transfer directorates have always worked together, developing strategies, products, and outreach activities that help us "put technology to work." Of course, similar relationships exist at other laboratories. We know that because we see their products and read about their successes in a variety of publications. One day several of us in Communications were talking about some of the problems with the media and how cumbersome the clearance process can be; and we realized that all the DOE multiprogram laboratories have to deal with the same issues. We decided it might be a good idea to get together and share our experiences and our knowledge of what works and what might work better.

When we proposed the conference to our Laboratory Director, Bill Wiley, we told him our goal would be to identify ways to strengthen Technology Transfer and Communications interactions and to improve outreach activities in support of DOE's technology transfer mission. He agreed that PNL should host the event and invited his fellow directors at the DOE multiprogram laboratories to send one or two representatives from their communications and technology transfer functions.

Perhaps it was mostly serendipity, but it was the right idea at the right time. Extensive legislation beginning in 1980 and, more recently, the National Competitiveness Technology Transfer Act of 1989 made technology transfer a full mission of the federal laboratories. The DOE's National Energy Strategy included technology transfer as a prominent component. The National Technology Transfer Initiative conferences were in full swing. And Secretary of Energy Notice SEN-33-91 had established a new, centralized technology transfer function--the Director of Technology Utilization.

We thought the conference would be an ideal opportunity for the recently appointed Director, Cherri Langenfeld, to explain how all these elements related to each other, to describe her goals and objectives, and to learn about the capabilities and resources at her disposal within DOE's multiprogram laboratories. We invited her to be our keynote speaker, and she accepted. We also invited Mary Joy Jameson, who was Director of the Office of Public Affairs at that time. When she left DOE to accept other employment, Barry Daniel agreed to participate, even though he had been named Director of the Office of Public Affairs less than a month before the conference. We rounded out our slate of

speakers with Dr. George "Pinky" Nelson, a former U.S. astronaut who is now involved in technology transfer as Assistant Provost at the University of Washington.

We were pleased when all the multiprogram laboratories accepted our invitation, and we were even more pleased when we began getting calls from DOE field offices that had learned about the conference and wanted to attend. And we are very grateful to all the talented men and women who participated in the conference and shared their expertise and know-how (see Appendix for a list of participants).

The Conference

The agenda for the conference (see Appendix) was simple and straightforward. During the first morning session, we heard welcoming remarks by Bill Wiley, PNL Director, and Lynn Engles, DOE-Richland Field Office; presentations by Cherri Langenfeld and Barry Daniel; and instructions for the afternoon session from Don Williams and Gary Petersen.

Because our purpose was to exchange ideas and discuss mutual concerns, we had decided to spend as much time as possible in small working groups; and because we wanted to talk about relevant subjects, we surveyed the participants in advance (see Appendix). When we tabulated the responses to the surveys, a distinct pattern emerged. There were seven areas of primary interest to most of the participants:

- media relations and "draws"
- trade shows, exhibits, and increased exposure
- field offices/headquarters interactions and funding
- special events, tours, and incentive programs
- audio/visual and print products
- leveraging/advertising
- networking.

In fact, so many people were interested in the media relations and "draws" that we formed two working groups on this topic. The groups were small--not more than 10 participants--so that everyone would have a chance to contribute to the discussion.

We asked for volunteers to chair the groups, and arranged for PNL staff to act as "facilitators" and note takers at each session. We promised to deliver typed copies of the chairpersons' notes that same evening so they could recap their groups' deliberations and recommendations at the plenary session the following morning. Thanks to the note takers and some really dedicated people in Text Processing, we kept our promise.

The working groups, then, were the core of the conference. Cherri Langenfeld provided a valuable DOE-Headquarters perspective on the issues discussed. The remainder of this document is a record of those meetings--the people who participated, the subjects they discussed, and the recommendations they made.

Media Relations and "Draws"

How can we improve media coverage of technology transfer activities?

The Issue

Laboratory management and DOE agree that technology transfer is important. Why can't we get the media excited about a CRADA signing or other technology transfer success stories? Not just trade and business press, but also the general press. All too often, the press is not even interested unless somebody important attends a signing event. Occasionally a prospective transfer involves something cute, glitzy, or sexy, e.g., no-melt chocolate or a laser potato peeler. Then, it's easy. But often the more important items, such as an improved combustion process, will impact the environment and the economy far into the future. How do we get people excited in the short range about effects in the long range?

Publicizing CRADA signings poses another challenge in the form of dealing with industrial public relations personnel. They often want to strip news releases of any content because they don't want--and don't need--publicity at the inception of development. Their program is to wait until the widget is ready to market and then mount an advertising campaign. However, DOE and laboratory management want publicity at the inception. Public Relations groups are caught in the middle.

Suggestions

Public Relations needs to be involved in the CRADA process from the beginning. Make publicity part of the negotiations. If feasible, get a



"Let your professional communicators do the communicating." [Barry Daniel, DOE Public Affairs (right), shown with Dan Arvizu, SNL]

quote from the CEO, or suggest that the CEO announce the signing. Signing ceremonies can make news if a person of high visibility is present. It should be noted, however, that DOE is more popular in some areas of the nation than others, and that response to a signing will reflect that reputation. Frequently, mention of DOE in a press release is deleted from the printed item.

Video and audio releases are possible mechanisms. CNN, PBS, the Discovery Channel, and radio talk shows can provide channels to potential audiences. For commercial channels, short video pieces with accompanying paper scripts and voice-overs can be a relatively inexpensive way to get attention and possible coverage. Laboratories are increasing their effective video production and are using video cost effectively. LANL archives footage and combines it for specific programs. Battelle's periodic "Battellevision" programs do double duty; they are distributed internally, and segments are sent to industrial contacts. SNL hosts a "media conference" (Albuquerque media) about technology transfer. Programs such as Cindy Tew's "Technology Today" project, which is about technology transfer at the DOE laboratories, could provide good exposure on national television.

Perhaps we can make better use of professional public affairs people at Headquarters. When asked for help, they are often reluctant to do so; we should find out why and encourage them to participate. We may be able to work through and with Barry Daniel on this issue.

Sensitivity Toward Foreign CRADAs

The subject of foreign CRADAs can be sensitive. Should U.S. Government money be going to foreign industry? Successful technology transfer results in profit--for someone. Criticism arises when tax-supported institutions appear to "give away the store." If jobs are created for U.S. workers, however, then the objective has been reached regardless of who "owns" the profitable technology. It may be a challenge to "sell" this concept; it's important that we speak to it with one voice. We need to be sure that the positive aspects are emphasized, such as creating jobs in the United States for U.S. workers.

Participants

Chair: Art Tressler, LBL Public Relations
Margaret Bogosian, BNL Technology Transfer
Harry Conner, ANL Public Affairs
Ace Etheridge, SNL Public Affairs
Jerry Holloway, PNL Communications
Omar Juveland, LANL Public Affairs
Sue Liebetrau, PNL Technology Transfer
Tom McClain, BMI Communications
Dallas Martin, NREL Technology Transfer
John Walsh, INEL Public Affairs
Facilitator: Jodi Hamm
Note Taker: Sallie Ortiz

Trade Shows, Exhibits, and Increased Exposure

Can impact and customer appeal be improved without increasing cost? Can the approval and production process be streamlined? Should DOE laboratories collaborate at selected trade shows?

General Guidelines Our goal is to improve our efforts at trade shows and exhibits, to obtain maximum results and cost effectiveness from trade show participation. A trade show is a venue for public/media attention and technology transfer participant prospects, an arena in which to present new technologies, capabilities, and products.

Advance Preparation and Follow-Up

Advance preparation is an important component of trade show activity. We can send teasers, press releases, and invitations to potential customers. For example, set up private briefings or meetings during the show for key potential clients. First, send letters to interested parties in local universities, state and regional government agencies, and industry. Schedule the briefings at a hotel on or near the show site, and invite the briefing participants to the show. Following the show, send follow-up letters to the briefing participants; invite them to visit the laboratory.



"We need to work with industry up front." [PNL Director Bill Wiley (left), shown here with Ron Kalb, LLNL]

It's important to know the trade show audience, i.e., to be on the same wavelength as the customer. DOE laboratories attend trade shows to talk about technology: "Look at all this neat technology we've developed that can help you."

But industry is looking for business opportunity: "Can I sell this for a profit?" Legislators are thinking about economic opportunity: "Will this create jobs?" The laboratory's message must be tailored to focus on a few specific technology areas or capabilities based on the customer's needs and desires. The exhibit personnel should include both research and technology transfer staff.

Follow-up is extremely important, not only when special "briefings" are held but for all contacts made during the show. Most "sales" are made after the show.

Effective follow-up includes evaluation. The objectives must be clear from the start and the results measurable. Contacts, industry visits to laboratory, CRADAs, licensing agreements, etc., can serve as benchmarks to measure success. Such follow-up evaluation is important for planning future show activities.

Collaboration on Bigger, Better Exhibits

It is clear that large exhibits get more attention and traffic, and that showy, "high-tech" exhibits are most effective. However, large, glitz exhibits tend to be very expensive. A solution is to get all the DOE laboratories together and collaborate on an exhibit.

The collaborative approach could be compared to a "shopping mall"; several traditional competitors work together to attract a larger audience. Collaboration would have several benefits. First, "more bang for the buck"--we attract a larger audience with our cumulative efforts. Second, we present a consistent message.

Collaborative efforts have proved successful. For example, Battelle notes that several Ohio companies traditionally attended a trade show in Hamburg, Germany, that is recognized as the biggest show in the world. However, these firms had always been ignored at the show; individually, they could not make a big enough "splash." They decided to collaborate on one big exhibit; and the State of Ohio agreed to fund 60 percent of the cost. As a team, they were much more successful at attracting attention in Hamburg. There are other examples: DOE Defense Programs laboratories have been participating in collaborative efforts with very positive results.

- **Ground Rules:** At least four ground rules would be essential:
 - 1) represent DOE first, to promote DOE image as a primary technology transfer agent;
 - 2) represent your own facility second;
 - 3) be clear about the mission before you start;
 - 4) don't be competitive in front of the customer. If one

laboratory representative can't help, send the customer to another who can. After the show, share the contacts.

- Targeting Shows: As part of the advance planning, it's important to target certain shows for a collaborative approach. Government-sponsored technology transfer shows are not good arenas for collaboration; industry participation turnout tends to be low. However, large industry shows would be excellent. At these events, both exhibitors and attendees are potential clients. Examples include the Autofac show held in Detroit every February, the large electronics-industry shows, and manufacturers' association shows. Obviously, it's important to pick shows in which all the collaborators have an interest.
- Planning and Tracking: There is concern about delays and/or roadblocks in the DOE approval process for a coordinated exhibit. However, Cherri Langenfeld suggests that the approval process may be easier if all the pieces of an exhibit are coordinated into a plan. The collaborators need to meet several weeks before the show to set goals. At the end of each show day, they should share successes (and lessons learned). The results should be recorded and presented to DOE--an opportunity to show DOE that this approach is effective and merits additional funding.
- Coordinating: A team representing several laboratories and DOE offices could coordinate the collaboration. We should recognize up-front that the effort will be time consuming, that the DOE laboratories are traditionally competitors, not collaborators. One possible strategy would be for DOE to hire a third party. Many companies hire professional firms to handle their exhibits.

Recommendations

1. Work to create DOE's image as the primary technology transfer organization (umbrella).
2. A steering committee representing the DOE national laboratories should coordinate a pilot exhibit at one major industry show during the next year.
Volunteers for Steering Committee: John Christie, Alex Fassbender, Sean Headrick, Kathryn Lang, Marjorie Mascheroni, Ann Rydalch.
3. This coordinated pilot project would be proposed to DOE for at least 50 percent funding.

Participants

Chair: Sean Headrick, DOE/DP
John Christie, BMI Corporate Development
Alex Fassbender, PNL Technology Transfer
Ron Kalb, LLNL Public Affairs
Kathryn Lang, PNL Communications
Marjorie Mascheroni, LANL Communications
Ann Rydalch, INEL Technology Transfer
Facilitator: Karen Powers
Note Taker: Terri Gilbride



Coordinating the session. [(from left) Tom McClain, BMI; Karen Powers, PNL; and Sean Headrick, DOE]

Field Offices/Headquarters Interactions and Funding

How can the DOE laboratories (collectively or individually) work more effectively with DOE Headquarters and the field offices? Can (or should) programmatic support be provided for technology transfer?

Effective Headquarters/Field Office/Laboratory Interactions

We raised several questions about consistency--or the lack of it--between the field offices and Headquarters, and across field offices. Should DOE be more centralized or more decentralized? Industry would like to see greater consistency and continuity across field offices, also among the DOE program offices. Not all field offices have technology transfer coordinators; are the field offices being "shut out" of technology transfer operations?

One area where this lack of consistency is particularly obvious is in CRADA formation. The coordination between field offices and Headquarters on CRADA matters needs strengthening. Is there over-emphasis on the number of CRADAs (rather than their quality) as a performance objective? Are field offices being improperly rated on CRADA time-to-approval? These issues can adversely affect laboratory/field office relationships.

Another area needing improved interaction is that of CRADAs. There is a need for more "model" CRADAs (revisions to the CRADA negotiation process). These models are being created.

Are CRADAs being oversold? Several other vehicles exist for technology transfer interaction, such as licensing, cost-sharing agreements, staff exchanges, and work for others. Are these being ignored or minimized in the rush to develop CRADAs?

Programmatic Support for Technology Transfer

Should the laboratories have block funding (set-aside money) for CRADAs and other technology transfer efforts (similar to the High Temperature Superconductivity Pilot Centers)? Currently, such funding is available through (and for) Defense Program laboratories only.

Technology transfer would have more credibility--within the laboratories and with industry--if it were programmatically funded. Now, most funding is through overhead. In general, the laboratories have three missions: R&D, ES&H, and technology transfer. We have funding for the R&D (programmatic) mission, but not for technology transfer. Should

funding for technology transfer be a line item? Should the DOE programs be held responsible? Some form of incentive is necessary if the scientists and engineers are going to accept technology transfer as a part of their R&D activities--it has to make sense. Programmatic funding would make more sense to the investigator than the current overhead method. There is no uniform DOE policy for allocation of funding (or implementation of technology transfer); each laboratory is responsible for implementing its own policies (and technology transfer funds). The National Competitiveness Technology Transfer Act of 1989 itself is vague: ". . . sufficient funding. . . to support the technology transfer function . . ." (Sec. 10).

Recommendations

After discussing issues in the categories above, we made five recommendations. Headquarters (Cherri Langenfeld) is willing to distribute them as needed across DOE.

1. DOE should develop and publish a 10-year technology transfer strategic plan that builds upon the current cross-cutting plan. The strategic plan should address issues such as funding administration of technology transfer, exhibits, outreach, and implementation.



"My office phone number is (202) 586-4940; . . . you may not get the answer you want, but you'll get an ear." [Barry Daniel, DOE Public Affairs]

2. To have more credibility, technology transfer should be directly funded through each DOE programmatic office. A consistent policy should exist across the DOE program offices.
3. Each DOE field office should have a technology transfer coordinator as contact point: contact among laboratories, field offices, and Headquarters. This is especially critical if Headquarters is decentralizing and field offices are taking more responsibility for technology transfer, CRADAs, etc.
4. Laboratories, field offices, and Headquarters should meet to coordinate technology transfer efforts in a synergistic manner and establish appropriate networking channels. Perhaps this should take the form of an annual or semiannual meeting of laboratory and field office staff to discuss issues (possibly by videoconference). One objective should be to encourage cooperation, rather than competition, among the laboratories and between the laboratories and DOE.
5. DOE could better define measurements of the laboratories' technology transfer performance. One aspect of this should be to address the concern that CRADAs are being overemphasized (quantity rather than quality). Other technology transfer mechanisms should also be encouraged (e.g., licensing, publications, cost-sharing agreements, staff exchanges, intern programs, user facilities, and work for others).

Participants

Chair: Paul Betten, ANL Technology Transfer
Dan Arvizu, SNL Technology Transfer
Bruce Davies, LBL Technology Transfer
Marv Erickson, PNL Technology Transfer
Pat Heth, LLNL Technology Transfer
Edye Jenkins, PNL Communications
Ben McCarthy, DOE-Albuquerque Communications
Gail McClure, DOE-Richland Technology Transfer
Blaine Metting, PNL Environmental Sciences
Brian Quirke, DOE-Chicago Communications
Facilitator: Julie Gephart
Note Taker: Kathi Hanson

Special Events, Tours, Incentive Programs

What kinds of special events are effective in stimulating staff interest and participation in technology transfer? What works best for tours and demonstrations?

What kinds of special programs can be used to reward and recognize staff for successes in innovation and technology transfer?

We focused on two types of special events, external and internal. External events include laboratory-sponsored symposiums and workshops, as well as attendance at trade shows and other outreach events.

External Events--to Attract Customers

Effective symposiums and workshops are more likely to draw industrial attendees if the focus is narrow. Direct mailings to a targeted group will encourage attendance, but small businesses may be missed. Trade magazines can be utilized effectively to get the message out. *Commerce Business Daily* is a good format. As a follow-up, interested attendees may be invited to visit the laboratory.

State and regional organizations can be useful, such as New Mexico's Rio Tech, the Tri-Cities' TRIDEC, and a Washington State consortium of



"Let's keep the network growing." [Gary Petersen, PNL]

about 900 software and biotech companies and environmental industries. By participating on the boards of such groups, we can learn more about the needs of regional industries.

Conferences and trade shows can be an effective way to attract potential customers. Trade show exhibits may be most effective when several people are in attendance at the booth--a crowd makes it comfortable for others to join in. Hands-on exhibits are good "draws," as are hand-outs or other "gimmicks" that are related to something in the booth. It is important, also, that technical staff be involved--they are equipped to talk about the technologies. However, this can mean substantial additional expense.

Technology 2001 is a good example of a coordinated effort. DOE requested floor space where all the DOE exhibits could be located together. Each laboratory could do its own "show and tell" while DOE, in the center, provided general information. There, or at a similar type of show, at least one laboratory could present a paper (preferably early in the show) and say that copies are available at the exhibits. Perhaps a standard piece on DOE laboratories could be attached to each copy of the paper.

It might also be possible for one laboratory to represent several at a trade show. For example, LANL defense programs "tact" teams might make a presentation at Chrysler as one representative for several laboratories.

Like trade shows, tours are a mixed bag for staff--exciting but time consuming. They interrupt the job. Researchers can easily become burned out. They feel better about tours if industry is involved--people with money. We'd like for research staff to enjoy participating in tours and onsite visits. They need rewards. An annual recognition luncheon is one kind of reward.

Internal Events--to Increase Staff Awareness

What exactly is the researcher's role in technology transfer? It can be difficult to define precisely. Does the technology transfer organization work directly with industry, or does research? The role of research is expanding; increasingly, researchers are doing the marketing. Then, who should initiate the contact--technology transfer or research? Technology transfer staff assigned within the research organizations are very effective at hearing ideas and identifying CRADA opportunities. They encourage researchers to become involved.

A number of other mechanisms can be used to increase staff awareness of, and interest in, technology transfer. Seminars (for example on CRADAs), internal newsletters, and cash incentive awards are used at various laboratories. Staff must be made aware that technology transfer is part of their jobs, not an extracurricular activity. This can be done by incorporating transfer activities into staff performance evaluations.

When staff perform effectively in technology transfer, they should be rewarded. Good feedback has been received from techniques such as posters, in-house and community news stories, expense-paid trips to awards banquets, Technology Transfer Days, recognition dinners, payment of royalty percentages, money for patents, and other cash awards.

(Food for thought: Don't overdo monetary rewards. Recognition of staff by peers and family is very important.)

Techniques That Work

The national laboratories have an advantage; they are centrally located (small businesses often are not). Visits are important; there is a synergistic effect in getting the client to the laboratory. Conversation could lead from the obvious technology to something that would work even better. Nonproprietary information should be available for outreach.

FLC and R&D 100 awards are good tools for selling technology. They generate nationwide publicity and result in numerous inquiries.

What is sent in response to inquiries? The nature of the material, and the timing, are important. Publications such as fact sheets are useful, as are technology fliers and "teasers." A good way to commercialize is to build a buyers list (from responses to laboratory advertising, etc.) that can be turned over to the customer.

The color issue is a problem with print products. The 10/31/91 DOE memo from M. J. Jameson allowed color for technology transfer marketing documents, but Public Affairs is still saying no. Sometimes there is discrepancy between the field office and Headquarters. Different laboratories are dealing with the color issue in different ways, but some are feeling at a definite disadvantage.

Participants

Chair: Don Williams, PNL Technology Transfer
Darryl Armstrong, ORNL Public Relations
Anne Baittinger, BNL Public Affairs
Ellen Bettencourt, LLNL Technology Transfer
Sue Fenimore, LANL Technology Transfer
Katie Larson, PNL Communications
Jim Leonard, SNL Laboratory Publications
Syl Morgan-Smith, NREL Public Relations
Chris Powers, DOE-Golden, Colorado
Hal Setzer, PNL Technology Transfer
Facilitator: Lisa Brown
Note Taker: Jan Tarantino

Media Relations and "Draws" II

How are the laboratories communicating technology transfer stories to the media? What works best? What doesn't work?

Successful Techniques

A number of marketing techniques are proving effective for the laboratories. For example, LLNL has established a relationship with the media. They have identified—and trained—a reporter who is interested in technology reporting. He now "checks in" periodically. This provides leverage; the laboratory is not selling products but is providing information on exciting technologies.

LBL has developed a New Technology Announcement, a three-page discussion of the technology, its applicability, benefits, and market research. It is distributed to emerging technology journals and other targeted journals simultaneously with a press release, which goes to general audiences. This technique has resulted in 300 to 400 responses from media and targeted audiences. A data base is used to track responses. Researchers do not field phone calls.

SNL responds to the Fairness of Opportunity issue by sending out a generic ad, and a quarterly newsletter is distributed to a 5000-person mailing list (by request). Results have been positive.

ORNL uses bingo or pop cards (reader response cards) with either feature articles or a photo/caption, which goes to journals. A technology transfer person must be available to handle responses in a timely fashion.

It's important to create visibility for individuals in the laboratory. One way is to show them in activities other than science, then tie them to the laboratory. High-quality video clips would be an effective way to enhance visibility; however, these can be expensive. Also, relating laboratory technologies to current popular topics, such as recycling, attracts attention. The important factor is to have a good relationship with the media. SNL is holding a workshop to explain technology transfer to the management of local networks and newspapers. PNL takes media representatives to the site. Holding an event to discuss emerging technologies might prove valuable.

The laboratories need to be seen collectively as a DOE family, to identify what is important and what is "good news." Both DOE and the laboratories need to focus less on the problems and more on the good

news. SNL provides opportunities for industry to hold media events about CRADAs or licenses 30 days before the DOE announcement. Press releases are another mechanism for doing that.

Lessons Learned Timeliness is a major problem--turning "good news" around quickly. The bad news turns around quickly enough. CRADA publicity has become almost political. Unfortunately, except for CNN, the national media don't cover science and technology credibly. Publications such as the Operations Reports result in more publicity for bad news than for good news. Should the laboratories share news releases? It takes months to get good R&D science and technology transfer stories out. We can't get media attention; we need to develop a better system, which will permit timely approval of releases.

Appropriateness is another problem. We need to educate people (especially scientists) on the interview process.

(Food for thought: The way to avoid being misquoted is not to be quoted in the first place. Problem: The media wants quotes, needs quotes for credibility.)

Take advantage of events; they are opportunities to be assertive and identify a role for the laboratory in the community. Mold the events, get involved, and find a way to participate.

Barriers to Media Communication

The need for DOE approval can be seen as a barrier. Another barrier is lack of planning for a positive approach. DOE laboratories are often perceived as bomb builders and polluters. This is part of the image problem, there is no mission, except perhaps cleanup, with which the public strongly identifies.



"This is your chance to tell each other what's working well and what isn't." (Don Williams, PNL)

We share programs in education, environment, and defense. Each of these has a cabinet-level position. It is difficult to portray a positive image when we don't have a clear focus.

Perhaps DOE needs to change its name. Department of Science and Technology? The challenge is to positively position the environmental restoration/remediation role. DOE--and the laboratories--should perhaps admit to having "screwed up" and made a mess, then focus on what is being done to repair the damage. What are we doing when we tell a technology transfer story? Selling products? Generating interest? Making DOE look good? We need to look at the different motives at work to determine how to tell the story most effectively.

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Facilitator: Geoff Harvey
Note Taker: Kelly Parnell

Audio/Visual and Print Products

How could the approval and production processes for audiovisual and printed media be streamlined? How could our products be more appealing within the present constraints?

Inconsistent Interpretations of Obsolete DOE Requirements

Significant stumbling blocks to the publication of effective technology transfer documents are the Government's restrictive requirements for color printing and the inconsistent interpretation (from field offices and within Headquarters) of those requirements. Technology transfer communication products usually fall under DOE's definition of public communication publications and audiovisual products (and exhibits) as publications produced with DOE funds and intended for distribution to the public. DOE lists 13 criteria for approval, including cost effectiveness, freedom from suggestion of being self-serving, technical accuracy, filling substantial public need, and adherence to Joint Committee on Printing regulations for illustrations, multicolor printing, paper stock, and trim sizes.

Because each DOE area office or field office appears to have its own interpretation, different laboratories must use different approaches for



"Providing guidance is a two-way street." [Cherri Langenfeld, DOE, shown with Ron Liikala, PNL]

meeting the DOE requirements. Also, interpretation appears to vary from one publications product to another; in other words, having a product accepted once (even by Headquarters) doesn't necessarily mean that the second product--of the same type--will also be accepted.

The current constraints evolved as part of a "moratorium on flashiness." The original reasons for some of these constraints are outdated, largely because of tremendous advances in pre-press technologies (such as on-line color separations). It is now possible to print in color and look good without appearing lavish. Printing costs have also decreased because of the new, more efficient processes.

Need for New DOE Guidance

The recommendations of the Public Information Publications Task Force, and the October 31, 1991, memo from M. J. Jameson supported increased flexibility in the production of technology transfer products. However, they do not appear to have become official guidance. It's time for Headquarters to change its approach toward technology transfer publications.

Cherri Langenfeld notes that it's easier to make change when there is broad consensus, good analysis, and input from the field. Thus, the laboratories (as a group) need to come up with some reasonable guidelines, including a characterization of technology transfer communication products.

Certain characteristics are typical. Technology transfer communication products are targeted toward an industrial or corporate audience. Their content covers capabilities and/or discoveries with high technology transfer potential. They may introduce technology transfer programs and describe how external users can gain access to programs and laboratories; or they may be success pieces on certain technology transfer efforts. These characteristics, or the definition appearing in the M. J. Jameson memo, should provide the basis for revised guidelines.

Action Item

We (this group) will collect data on two issues: the relative impacts of four-color and black-and-white printing; and the cost of four-color compared to black-and-white production. [Ed. note: the data are still being collected and studied as of this printing.]

Improving the Production Process

The laboratories have various methods for improved production. LANL has a style guide for format, especially for different types of desktop publishing products. A master is provided on diskette but is difficult to transfer to the various computer types in use at the laboratory. PNL provides guidance (including templates) and encouragement to follow the "family look." Battelle Corporate has established requirements on use of the logo.

Because the methods used by the laboratories vary greatly, and because we must use the Government Printing Office for many of our publications, it is not possible to make specific recommendations for improved production.

Recommendations

1. On the issue of DOE corporate identity, we recommend that DOE develop a new logo to match a revised identity.
2. The laboratories should combine efforts to provide DOE with information on advances in communications product technology (see data collection effort above) and negotiate further for an adjustment of the current publication standards.

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Facilitator: Jim Thielman
Note Taker: Andrea Currie



Participants networking. [(from left) Gary Petersen, PNL; Pat Heth, LLNL; Cherri Langenfeld, DOE; and Bill Wiley, PNL; Ann Rydalch, INEL]

Leveraging and Advertising

Is advertising a viable option for DOE laboratories? If so, where and how could it be used most effectively? Can local or state agencies, businesses, etc., be involved usefully in a laboratory's outreach program? Can external advisory groups or task forces be of assistance?

Advertising

A major issue is the lack of a clear DOE policy concerning advertisements. DOE does not allow laboratory funds to be used for "promotional" purposes, but soliciting business and recruiting are acceptable. At what point does soliciting business end and promotion begin? There is a substantial "gray area." Many feel that inconsistent policies across DOE obstruct effective technology transfer.

One way to "advertise" while staying within the perceived realm of public acceptance is to publish success stories. A "tombstone" ad could be a viable method (cost leveraged between DOE and industry). Another method is the publication of one-to-two-page descriptions of available technologies in magazines such as *R&D*. PNL calls them "announcements." Example: "We're seeing exciting research results in xxx area and are interested in finding partners to pursue R&D activities."

The laboratories could share advertising costs. Advertising is good exposure (and, therefore, good business) but difficult to implement. Industry budgets, by contrast, are more flexible and the results are more tangible. The laboratories have no advertising budgets.

Another major issue is that DOE lacks an image as technology transfer advocate. So DOE itself needs a distinctive ad, one which provides a positive image. A consistent ad format is needed (for example, two scientists explaining a technology). The objective is to tell industries what we can do for them. Such ads should be geared toward the business community, and targeted as much as possible at the individuals who can make a difference, such as the CEO in a small company or an engineering or technology director in a large company. However, targeting a specific position (CEO, engineering director, etc.) is difficult.

While individual ads could lead to competition among the laboratories, DOE can advertise its leadership in technology transfer, to make it known that technology transfer is part of its vision, policy, and mission! Then each laboratory under the DOE umbrella can advertise as part of the Big Picture. This could be done through an umbrella advertisement or a brochure. The objective is to promote DOE's image as an effective technology transfer agent—and through that, promote the laboratories' images.

Other methods used by the laboratories are the pursuit of awards (PNL had 1031 responses to publicity surrounding its 1991 R&D 100 awards--that's good advertising!) and advertising through exhibits. One DOE exhibit at the National Technology Initiative shows could include all the laboratories--and the laboratories could manage the booth. This method would do double duty, enhancing the image of both DOE and the individual laboratories in the DOE family.

These techniques can be considered **marketing approaches or advertising**. The differences are subtle. The goals, in either case, are to further technology transfer and improve DOE's image.

Leveraging

Leveraging means working through or with other groups (for example, Aerospace Institute of America) to achieve better results. To be competitive, DOE must target industry's "10 top needs" and then go to industry and "sell" the laboratory research products that meet those needs. The laboratories should become involved with state development programs, trade associations, and Chambers of Commerce. "Technology Transfer Conferences" is an organization that can help link laboratories with potential customers. Outside "focus groups" consisting of industry representatives can help the laboratories focus research on industry needs. It is critical that all such relationships be "two-way." In other words, the laboratories and outside organizations must share ideas and communicate needs to each other if there is to be real progress.

Issues

DOE must seek to develop a "technology transfer image." To accomplish this, DOE must establish an overall DOE vision and a strategy with a clear, concise statement of policy on advertising, promotion, and business practices. The laboratories need to develop a "clear reason" for



"It's important that we have a sense of corporate identity." [Barry Daniel, DOE, shown with Pat Heth, LLNL]

their research--what they can do with the technology once it is ready for marketing. Priorities need to be set by DOE so that the laboratories know how to proceed.

(Food for thought: should we be publicizing technology capabilities or technology transfer capabilities?)

Moreover, DOE and the laboratories need to develop and implement structures that enable them to handle the business from increased advertising. If DOE (or another federal agency) is to keep any kind of data base, the laboratories must find a means of providing regular, accurate input. Currently, we tend to see such record-keeping as a nuisance (i.e., we need to see how we benefit from the input we provide to DOE).

Recommendations

1. DOE should print a color technology transfer brochure about the DOE family of laboratories, in which the laboratories are listed. The laboratories could add their own pieces (for example, the Federal Laboratory Consortium ad in *Washington Technology Week*). Such a brochure would be helpful in introducing DOE and the laboratories to outside groups.
2. DOE should establish a test period for relaxation of rules such as those concerning use of color. Let the laboratories experiment with some publications such as full-color brochures. Full-color brochures would help the laboratories market themselves to outside groups.
3. A six-minute video program should be prepared by DOE that describes its mission and technology transfer focus. Each laboratory could then add four minutes of its own.
4. DOE and the laboratories should make use of advertising agencies to ensure the best possible products for the money.

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Ace Etheridge, SNL Public Relations
Gail McClure, DOE-Richland, Washington
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Todd Nelson, PNL Communications
John Walsh, INEL Public Affairs
Facilitator: Nancy Burleigh
Note Taker: Sheila Bennett

Networking

How can the network being established at this conference be maintained so the participants can continue to work together and share experiences and knowledge?

Mutual Benefits

For this conference to have been successful, the network established here must provide sustained mutual benefit. The value of this conference is that it represents cooperation of technology transfer and public affairs organizations. However, we participants need to look at the needs of our organizations and the industries with whom we deal and then to channel energies and funds where they will be most cost effective and helpful. Networking must expand to those who will ultimately be involved and receive benefits.

Technology transfer is our mission. We must respond to the outside world, but individually, we are overwhelmed. We must combine resources; networking and other cooperative efforts are means to do it. The laboratories should, however, take the initiative rather than expecting DOE to do so. Trade shows and other exhibits, put together cooperatively and evaluated by performance measures and targets, are an example of this initiative.

Several levels of networking can be considered. Within a laboratory, research groups must be aware of each other's activities, and technology transfer must network with public affairs. Interlaboratory communication is also vitally important. However, the message must become broader--a message that the laboratories do more than just build bombs. The outside world--the industries we represent--must also be made aware of our activities. Technology transfer is a contact sport; it is one-on-one interaction. Moreover, we must expand beyond our local communities and regions. The idea that only local markets will receive our technology defeats our purpose; the benefits often extend nationally, even internationally. An external network can help expand our horizons.

Computer Bulletin Board

The use of computer bulletin boards is a possibility for strengthening the DOE/laboratory network. It would be relatively easy to set one up; however, care must be taken to avoid release of proprietary/patent information (scientists should not use it). This network would deal with meetings, methods, patent information, problems, funding availability, and similar topics. The bulletin board would not be a data base for technologies, only a mechanism for networking. Such a network could enable us to assemble powerful interlaboratory technology packages, which would be very sellable.

Computer Data Base

This type of information might be made available to industry. However, setting up such a data base is a gargantuan job. We might wish to investigate the possibility of an Outreach network that takes highlights from DOE/laboratory data bases. The National Appropriate Technology Assistance System (NADAS) is a little-known tool for business-related information. Perhaps it or a similar existing group/data base could be utilized.

Recommendations

1. Identify the host for the next technology transfer/communications meeting. The host laboratory may also be responsible for organizing the second cooperative trade show exhibit (PNL is doing the first one). Set a time frame for meeting to keep the network going: twice a year until the mechanism is firmly in place, once a year thereafter.
2. Establish an interactive computer bulletin board for exchanging information among the laboratories and DOE on meetings, technology transfer opportunities, on contact industries, and on methods and problems. It would be ad hoc, not a data base. Contact the Headquarters Administration Division to establish a bulletin board for exchanging information about meetings, opportunities, personnel, industries, methods, and problems.
3. Identify a lead person to take on this responsibility and to define audience, users, and purpose. The lead could be someone from Headquarters Public Affairs.
4. Establish a group to do follow-up from this meeting so that the "high" established from this meeting can be sustained and the recommendations accomplished. Assign specific activities to each member. Include both technology transfer and marketing people. (Pat Heth and Sue Fenimore volunteered.)
5. Explore the value of external networking--without each laboratory duplicating its own efforts but leveraging off the capabilities of other laboratories. Designate key capabilities of each.

Note from the Plenary Session: NREL agreed to host the next technology transfer/communications meeting, to be held in December in Golden, Colorado. The follow-up task force was established: Sue Fenimore, Pat Heth, Darryl Armstrong, Ann Rydalch, and Don Williams.

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Facilitator: Terese Wallace
Note Taker: Rosalind Schrempf



"Challenge' is just another word for opportunity." [Lynn Engles, DOE Richland Field Office]

Looking Forward

Any trepidation the PNL staff may have had prior to the Technology Transfer/Communications conference turned out to be unfounded, primarily because each of you participated in a way that made the conference successful. Harry Conner of ANL said it best in a letter he sent to Don Williams and me after the event: "Calling that Technology Transfer/Communications meeting on your own was a gutsy move. It had immense potential either to bomb or to fizzle. In my opinion, it did neither. We may not have solved all the problems, but at least we lit a few candles in the darkness."

I think you did more than light a few candles. Frankly, as I reviewed these proceedings I was a bit overwhelmed. Just when I get the feeling that I'm fairly experienced and able to handle most any communications challenge, along comes a group like yours. In the space of about eight hours of discussion, you developed some very achievable ideas and recommendations that had never occurred to me—recommendations that will move DOE's national labs closer to transferring our products to U.S. companies. In today's business vernacular, you provided the "Value-Added."

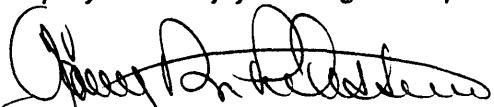
PNL, and each of you as individuals and representatives of your labs or field offices, has an investment in the recommendations contained in these proceedings. Now our job is to ensure that we obtain a return on that investment.

For example, one working group met to discuss trade shows, exhibits, and increased exposure. The group recommended that a steering committee representing the DOE national labs should coordinate a pilot exhibit at one major industry show next year. Several members of the group volunteered to serve on the steering committee, and a draft proposal has been developed for an exhibit at the Society of Automotive Engineers show in the spring of 1993.

In addition, Syl Morgan-Smith (National Renewable Energy Laboratory) has agreed to host the 2nd Technology Transfer/Communications conference in Golden, Colorado, next year. She's planning the conference for January (a lovely time to visit "mile-high" Denver). Her reasoning is sound . . . the meeting will happen after the elections.

I look forward to hearing from you between now and January and to seeing you in Golden at the conference. Make a commitment to be there. Let's keep the network growing and the returns coming in on our mutual investment.

On behalf of the PNL staff, thanks to each of you for your participation and special thanks to Cherri Langenfeld and Barry Daniel for supporting the conference and taking such active roles. (We're still kicking ourselves for not recording both of their dynamic presentations!) I hope you all enjoy reading these proceedings as much as I have.



*Gary R. Petersen
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Appendix

Appendix

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Agenda

Technology Transfer/Communications Conference Pacific Northwest Laboratory May 19-21, 1992

Tuesday, May 19, 1992 - Conferees arrive

6:30 p.m. - Welcoming "Get Acquainted" reception

Wednesday, May 20, 1992

8:00 a.m. - Sign in, Battelle Auditorium Lobby

8:30 a.m. - Welcome to the Pacific Northwest Laboratory, W. R. Wiley, Director, PNL

8:45 a.m. - Welcome to Hanford, Lynn Engles, Director, Office of Communications, Richland Field Office

9:00 a.m. - Keynote Speaker, C. J. Langenfeld, Director, Technology Utilization, DOE Headquarters

9:45 a.m. - Q&A

10:00 a.m. - Break

10:15 a.m. - Guest Speaker, Barry Daniel, Director, Office of Public Affairs, DOE Headquarters

11:00 a.m. - Q&A

11:15 a.m. - Conference Goals and Objectives--G. R. Petersen, Director, Communications and L. D. Williams, Director, Technology Transfer, PNL

12:00 p.m. - Lunch, Auditorium Lobby or Courtyard

1:00 p.m. - Working Group Sessions

2:30 p.m. - Break

2:45 p.m. - Working Group Sessions

4:15 p.m. - Wrap-Up, G. R. Petersen

4:30 p.m. - Adjourn

6:30 p.m. - Social hour and dinner--Hanford House, Richland, Washington: Master of Ceremonies, Loren C. Schmid, Chairman, Federal Laboratory Consortium; Guest Speaker, Dr. George "Pinky" Nelson, Assistant Provost, University of Washington

Thursday, May 21, 1992

7:30 a.m. - Continental Breakfast and Plenary Session, Hanford House

10:00 a.m. - Tour PNL (tentative)

12:00 p.m. - Adjourn

Survey

In order to identify topics for discussion at the conference, we surveyed the potential participants. First, we polled staff from the PNL Technology Transfer and Communications directorates. The resulting list was then submitted to the other laboratories. Each lab was asked to rank the topics on the survey and to suggest new topics. Those lab responses guided the development of the conference agenda. The survey and a summary of the responses are shown below.

Survey Results			
	Very Interesting	Somewhat Interesting	Hardly Interesting
Marketing/Outreach Techniques:			
Trade Shows	6	8	1
Media Relations	14	2	0
Advertising	6	5	4
Direct Mail	2	4	9
Follow-up/Tracking	3	8	4
Leveraging	7	7	1
Marketing/Outreach Tools:			
Audio/Visual and Print Products	9	3	3
Exhibits	7	5	3
Media "Draws"	13	2	1
Tours	5	6	3
Other Resources	5	4	6
In-House Programs:			
Special Events	7	7	1
Incentive Programs	6	8	1
Intellectual Property	1	6	8
Laboratory/DOE Interactions:			
Field Offices/Headquarters	9	6	1
Increased Exposure	6	5	5
Networking	9	5	1
Funding	8	2	5

Survey of Possible Working Group Topics

During the afternoon of May 20, conference attendees will be divided into at least four working groups, which will meet simultaneously from 1:00 to 2:30 p.m. Each group will discuss a different topic. At 3:00 p.m., the working groups will reform to discuss four more topics. On the morning of May 21, the eight working group leaders will deliver their reports in plenary session. Please help us select appropriate discussion topics by indicating your level of interest in the subjects listed below or by suggesting alternative topics (attach extra pages if necessary). Circle 1 if the subject is of great interest; 2 if it is somewhat interesting; or 3 if it is of little or no interest.

Would you be willing to chair one of the working group sessions? Yes No

If so, which topic would you prefer your group to discuss?

Marketing/Outreach Techniques:

1 2 3 **Trade Shows:** Should DOE labs collaborate at selected trade shows? What would be the advantages or disadvantages? What difficulties could we encounter?

1 2 3 **Media Relations:** How can we increase media coverage of licensing agreements, CRADAs, and other technology transfer issues? What elements do media see as newsworthy? What message of image do we want media to promote? Who is our audience?

1 2 3 **Advertising:** Is advertising a viable option for DOE labs? If so, where and how could it be used most effectively?

1 2 3 **Direct Mail:** Is direct mail effective? If so, what products or information should be mailed? What's the best way to compile a mailing list and keep it current?

1 2 3 **Follow-Up/Tracking:** What's the best way to track inquiries and requests for information? Can these records be categorized and used for subsequent mailings, to plan visits that help maximize time spent on the road, etc.?

1 2 3 **Leveraging:** Can local or state agencies, businesses, etc., be involved usefully in a lab's outreach programs? If so, what roles can they play? Can external advisory groups or task forces of representatives from academia, business, and industry be of assistance to outreach programs?

Alternative Topics on Marketing/Outreach Techniques:

1 2 3

1 2 3

Marketing/Outreach Tools:

- 1 2 3 **Audio/Visual and Print Products:** How could the approval and production processes be streamlined? How could our products be more appealing within the present constraints?
- 1 2 3 **Exhibits:** Can impact and customer appeal be improved without increasing cost? Can the approval and production process be streamlined? How--in addition to trade shows or conferences--can exhibits be used effectively?
- 1 2 3 **Media "Draws":** How effective are various tools, including press conferences, ceremonial signings, case studies, and news releases in encouraging media to cover technology transfer stories?
- 1 2 3 **Tours:** What works best for tours or demonstrations--a Tech Transfer Center, Visitors' Area, walk-throughs, exhibits and displays, etc.?
- 1 2 3 **Other Resources:** What special tools, capabilities, or resources can be used in outreach programs?

Alternative Topics on Marketing/Outreach Tools:

- 1 2 3
- 1 2 3

In-House Programs:

- 1 2 3 **Special Events:** What kinds of special events can be used to stimulate staff interest and participation in technology transfer? Which are most likely to be effective?
- 1 2 3 **Incentive Programs:** What kinds of special programs can be used to reward and recognize staff for successes in innovation and technology transfer?
- 1 2 3 **Intellectual Property:** How can IP be protected while it is being marketed?

Alternative Topics on In-House Programs:

- 1 2 3
- 1 2 3

Laboratory/DOE Interactions:

- 1 2 3 **Field Offices/Headquarters:** How can the DOE labs (collectively or individually) work more effectively with DOE Headquarters and the Field Offices?
- 1 2 3 **Increased Exposure/National Media:** How is DOE using its annual report on technology (i.e., Technology '91)? Are there other ways it could be used (e.g. reprints of specific sections)? Would it be useful (and possible) to conduct an annual national media tour of DOE's multiprogram labs?
- 1 2 3 **Networking:** How can the network being established at this conference be maintained so the participants can continue to work together and share experiences and knowledge?
- 1 2 3 **Funding:** Can (or should) programmatic support be provided for technology transfer (e.g., include tech transfer in the Statement of Work)?

Alternative Topics on Laboratory/DOE Interactions:

- 1 2 3
- 1 2 3

Name and Phone Number

Date

DATE
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01/01/93

