IEEE

PCS Awards for 2002

IPCC 2002 in Portland, Oregon, was the venue for the annual presentation of PCS awards on 20 September. This is our opportunity to recognize the contributions that particular individuals have made to the field of technical communication and to the Professional Communication Society.

Interim awards chair George Hayhoe presented the *Ronald S. Blicq Award* for distinguished contributions in technical communication education to **Mary M. Lay**; in accepting, Dr. Lay put the audience in a good mood when she revealed that she was once an associate editor in IEEE Publications in New York City (1968-1970) and recounted some non-editorial activities there.

The *Alfred N. Goldsmith Award* for outstanding achievements in technical communication went to **Edward R. Tufte**, who was unable to attend.

President Beth Moeller presented the *Emily K. Schlesinger Award* for outstanding service to the society to **George F. Hayhoe**; she noted that past president Hayhoe was so anxious to become *past* president that he phoned her daily last December to make sure she was ready for the transition.

Transactions editor Kim Campbell presented the *Rudolph J. Joenk, Jr. Award* for best paper in the *IEEE Transactions on Professional Communication* the preceding year to **Fatemeh "Mariam" Zahedi, William V. Van Pelt,** and **Jaeki Song** (not present) for "A Conceptual Framework for International Web Design," vol. 44, no. 2, June 2001, pp. 83-103.

Blicq Award
Mary M. Lay

Mary Lay is a professor in the department of rhetoric at the University of Minnesota (1993-present) where she directed the graduate degree programs in rhetoric and scientific and technical communication (1997-2001). She has also directed the Center for Advanced Feminist Studies at Minnesota and is a faculty fellow of the school of law. She holds Ph.D. (1975) and M.A. (1972) degrees in English from the University of New Mexico.

Mary Lay

Dr. Lay is former chair of the department of technical communications at Clarkson University (1981-1991) and is a fellow (1994-present) and former president (1988-1990) of the Association of Teachers of Technical Writing; she is coeditor of *Technical Communication Quarterly* for the ATTW.

Dr. Lay is author of *The Rhetoric of Midwifery* (Rutgers Univ. Press, 2000), which won the 2001 NCTE best book Award for Excellence in Technical and Scientific Writing, and coeditor of *Body Talk: Rhetoric, Technology, Reproduction* (Wisconsin
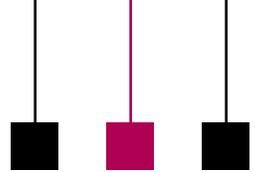
Rudy Joenk

This Issue

Persuasive Presentations is a new column by Jason Palmeri and Paul Tuten. In the opening article, they focus on setting up the issues involved in persuasion. In subsequent articles they will provide strategies for structuring persuasive presentations and specific techniques and examples for meeting challenges.

Twelve volunteer reporters at IPCC 2002 are hereby granted heaps of INSTANT FAME and my sincere thanks for their reports that appear in this issue: David Beer, Eduardo Clark, Marj Davis, Debbie Davy, David Farkas, Julie Gephart, Roger Grice, Luke Maki, Stephanie Rosenbaum, Laura Schultz, Jan Spyridakis, and Michaël Steehouder. This is the largest volunteer staff we've ever had. I apologize, however, if your session didn't get reported.

On page 15 is my quinquennial pastiche, which completes the *Newsletter*'s observance of PCS's 45th year.

The September/October *Newsletter* on our Web site as a PDF file has active e-mail, Web, and table-of-contents links. Issues are posted about one month after distribution of the print version.

> Deadlines are the 15th of the odd-numbered months.

AdCom

On page 5 secretary Jean-luc Doumont reports the highlights of the 20-21 September AdCom meeting at IPCC 2002 in Portland, Oregon. The next meeting will be online 25-26 January 2003 and then 17-18 May in Dallas, Texas, prior to the STC conference. If needed, there may be another teleconference in July. The final meeting of 2003 will 20-21 September prior to IPCC 2003 in Orlando, Florida.

Potpourri

0–0. That's the score; no one submitted either a correct or a wrong answer to whether *who* or *whom* belongs in the following sentence: "It goes straight from the designated starting person to ___ever his or her most distant known ancestor is." E-mail me your choice and I'll keep score. Last chance to beat the grammar hotlines.

"A long time ago in a galaxy far, far away…," when I attended conferences for reasons other than taking pictures, the bane of conference goers was the presenters who read their printed presentations to us or who turned their backs on us and read what they had projected on the screen. Technology having marched on, presenters now can face us and, with nothing in their hands, read the screen of their laptop on a table a few feet away.

Spontaneous Yoda-like prediction from Julia Williams: "Write better you will."

You probably know that "Call me Ishmael" is the opening line of Herman Melville's *Moby Dick*. But who, before Snoopy and a new Walter Wager thriller, opened a story with "It was a dark and stormy night"? Visit *http://www.people. cornell.edu/pages/jad22* for some other good opening lines.

"We have a new stove in our office and now that fall time is close at hand, we put our subscribers on notice that we burn both wood and poetry." From *The Atlanta Constitution*, 19 August 1905.

"The English-speaking world may be divided into (1) those who neither know nor care what a split infinitive is; (2) those who do not know, but

Elizabeth Weise Moeller

PCS Is What *You* Make It

I have heard a lot that PCS is "the best kept secret in the IEEE." We're working really hard to change that, but it's going to require help. In the past couple of months we've gotten some good financial news, launched the first of our new workshop series, and had some disappointments with our online voting, all of which directly impact the changes the society is going through to be more responsive to members' needs.

Interesting Changes on the Fiscal Front

We're on target for 2002 and it looks like we'll finish the year right around budget. The good news comes for 2003. Due to IEEE corporate changes, PCS's allocation for corporate expenses in 2003 has been reduced. The net result is an increased spending budget for us of about USD 20k. Treasurer Steve Robinson and I reviewed the projects in progress and felt the best use of these funds was in the development of our education products, specifically our Web-based education and workshop series.

You will have a dues increase for 2003 and, unfortunately, there will be subsequent dues increases. Throughout recent history our conference surpluses have been subsidizing member services, such as this *Newsletter*. In June the IEEE Technical Activities Board (TAB), of which I am a member, voted to strongly encourage all societies and councils to make sure that member dues cover the costs of producing items like this *Newsletter*, the *IEEE Transactions on Professional Communication*, and any other items provided to PCS members. Societies and councils that do not raise their dues to cover such costs by 2005 will need to justify their reasoning to the TAB finance committee.

This change may be a blessing in disguise for PCS. In the current economy, conference attendance is questionable at best. PCS always produces a strong conference, but economic factors play a large role in the attendance from year to year. It is not a good idea for the fiscal health of the society to rely on those surpluses. By raising our dues so that member services are covered, we can guarantee that the basics are always covered—we will not have to worry about cutting or reducing a service such as the *Newsletter*. In addition, we can then use our conference surpluses to help produce new products for PCS members, such as Web education and workshops. Other societies are able to offer Web-based short courses to their members for minimal fees (some for no fee at all). I would love to be in a position to provide a service like that for PCS members.

The First New Workshops

I know this is not the first time that PCS has offered workshops, but this is the beginning of a new era in PCS workshops. Julia Williams did a great job putting together three workshops in conjunction with IPCC 2002. The ones developed this year will become part of a series that can be customized and brought to your location. PCS has pulled together a wide range of experts who can customize workshops on topics ranging from basic writing skills to documentation design to Web site design to usability. For more information, visit *http://www.ieeepcs.org/workshops/*.

PCS Is Your Society

If you are reading this *Newsletter*, it's a good bet that you are a member of PCS. We know people read and pass on the *Newsletter*. We know that people attend IPCC every year. We know that the society matters to many people, which is why we were disappointed with the first round of electronic voting. For the first year in a very long time, you were able to vote on members of the PCS administrative committee (AdCom). When electronic voting closed on 1 September, only about one percent of the members had exercised their right to vote. Why?

I have been involved with PCS for seven years. We've had a large turnover in the AdCom over the past few years—which is not a bad thing. Fresh faces, fresh voices, and fresh ideas all help build the society. But the part that concerns me is that the committee chairs have been doing most of the work for lack of assistance. Anyone who is a member of this society is qualified to help out in one area or another. Everyone is busy, I know that. I'm the classic over-booked person, but I really feel that PCS is worth the time I put into it. Volunteering does not mean you will be recruited for a society office (unless you want to be) or asked to do anything outside your expertise.
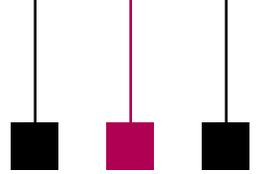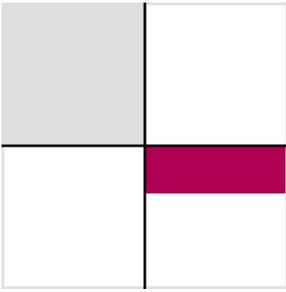
Helping out can simply mean lending a hand on a quick project—two or three hours of your time and you're done. It is amazing how much something like that can help a committee chair.

What can you do in two-three hours? The editor of the *IEEE Transactions on Professional Communication* is always looking for people to review articles. The editor of the *Newsletter* is looking for people to write short articles—often on a topic of your choice. Feel free to pitch single-article ideas to him. Once we get the first Web education course online, we'll need people to test it. As we build the new-member Web portal, we need people to write small sections of content. The new portal is being designed to include information that members can use in their day-to-day work. Do you have a list of resources you find useful? Organize them by topic and send them to our Web master (*lstrianese@ieee.org*). None of these tasks takes a lot of time, but they can help immensely.

PCS is not unique in that it is run by volunteers. *All* IEEE societies and councils are essentially volunteer-driven. Some of the larger societies have administrative staff to help with the paperwork, but most are completely run by volunteers. This is why it is so important to lend a hand. If you read my Reinventing PCS column in the July/August issue, you know that there are a lot of changes ahead. Committee chairs need your help. Just two-three hours of your time and you can say that you helped make *your* PCS a little stronger.

From the Editor

(continued from page 2)

care very much; (3) those who know and condemn; (4) those who know and distinguish. Those who neither know nor care are the vast majority, and are a happy folk, to be envied by most of the minority classes." H. W. Fowler in *Modern English Usage*, 1926.

Information for Authors

One thousand words makes a nice page-and-a-half article, though longer and shorter articles may be appropriate. Proposals for periodic columns are also welcome.

If you use a wp program, **keep your formatting simple**; multiple fonts and sizes, customized paragraphing and line spacing, personalized styles, etc. have to be filtered out before being recoded in *Newsletter* style. Headers, footers, and tables lead the casualty list. **Embed only enough specialized formatting and high-lighting (boldface, italics, bullets) to show me your preferences.**

If you borrow text—more than a fair-use sentence or two—from previously published material, you are responsible for obtaining written permission for its use. Ditto for graphics. Always give credit to the author or artist.

The *Newsletter* issues on our Web site can be used as examples (*http://www.ieeepcs.org/newsletter.html*).

I prefer to receive articles by e-mail; most WordPerfect, Word (except XP), RTF (rich text format), and ASCII files are acceptable. My addresses are in the boilerplate at the bottom of page 2 along with our copyright notice.

Deadlines

The 15th day of each odd-numbered month is the deadline for publication in the succeeding odd-numbered month. For example, the deadline is 15 January 2003 for the March/April issue, 15 March for the May/June issue, etc. You won't be far off (and never late) if you observe the Ides of January, March, May and so on.

"Never consider yourself a failure—you can always serve as a bad example."
—*Thom Haller*

If this copy of the *Newsletter* you're reading isn't yours, consider joining the Professional Communication Society as either a member of the IEEE and PCS or an affiliate of PCS. Visit our Web page (*http://www.ieeepcs.org/membership.htm*) for information; applications are online. On the other hand, if this copy is yours, please lend it to a friend.
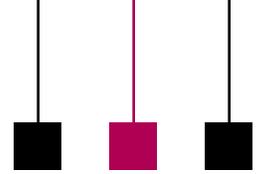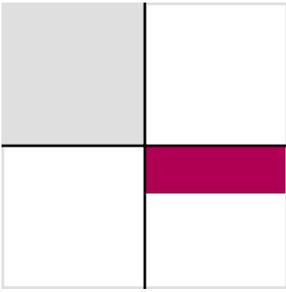
Highlights of the September AdCom Meeting

By Jean-luc Doumont

For IPCC 2002 attendees, Friday afternoon marked the end of an intense few days. For those of us on the Professional Communication Society administrative committee (AdCom), Friday afternoon also marked the beginning of a no less intense 24 hours of meeting, working through dinner and lunch, till late at night and from early morning again. Leading a society such as PCS is a challenge; fortunately, all 18 of us thrive on challenge, so all is well.

In line with both our April meeting in Atlanta, Georgia, and our July meeting by telephone, we devoted most of the September meeting to a fundamental issue: Whom do we serve and how do we serve them? In a world that is changing more rapidly than ever, a society such as ours must constantly revisit its reason for being—all the more so in the difficult financial context that IEEE as a whole is struggling with lately. Once our reflections crystallize into a suitable form, we will be sure to share them with you, so look for follow-up articles about who we are, what we do, and how we do it in upcoming issues of the *Newsletter*.

Still, the financial picture is no longer as grim as it was a year ago. Steve Robinson, our treasurer, had good news: Our lean management was rewarded with a surplus for 2002 and, because we recovered some of what IEEE had drawn arbitrarily from our finances, our 2003 budget is not quite as tight as we had feared. Of course, sound financial management remains a priority for the years to come.

Elections

With 18 members serving interlaced three-year terms on the AdCom, six members are up for (re)election every year. In the past, all six members were elected by the AdCom, but, following a change in our constitution and bylaws a year ago, now three of these six members are elected by the membership at large.

Despite repeated notices in the *Newsletter*, only 14 of our members voted in July and August: 13 of them electronically and one with a mailed paper ballot. The membership at large thus reelected George Hayhoe, Bernadette Longo, and Beth Moeller. At its September meeting, the AdCom then elected Bill Albing and reelected Roger Grice and Julia Williams. Also, Robert Krull was appointed to the unexpired one-year term of Muriel Zimmerman, who had resigned. Congratulations to all and welcome on board, Bill and Bob!

As for officers, the AdCom reelected Beth Moeller as president and Ed Clark as vice president, both of them for a second one-year term.

Awards

The AdCom voted to confer the 2003 *Alfred N. Goldsmith Award* for outstanding contributions to the field of technical communication on Bill Horton, an internationally recognized expert on the productive and appropriate use of new media and communication technologies, and the 2003 *Ronald S. Blicq Award* for distinguished contributions to technical communication education on Dan Jones, a professor at the University of Central Florida. Warm congratulations to both of them!

Conferences

IPCC 2002 turned out to be a clear success, not only for the quality of its contents (see detailed accounts elsewhere in this *Newsletter*), but also for its attendance and, consequently, its positive financial result.
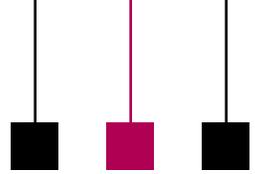
The lineup: *Beth Moeller, Roger Grice, Marj Davis, George Hayhoe, Julia Williams, Jean-luc Doumont; note PCS logo on pockets*

Left: *Working on our mission statement*

The Challenges of Persuasion

By Jason Palmeri and Paul Tuten

Drawing on rhetorical, linguistic, and graphic design theories, professional communicators seek to create texts and presentations that communicate complex information clearly and concisely. To do so, they focus on their audience, often concentrating on usability—on making sure that their documents or presentations provide the audience with the clear instructions required to easily perform a complex technical task. Yet, while the field has attended deeply to—and been successful at—developing strategies for presenting technical information, adequate attention has not yet been paid to the role of *persuasion* in technical discourse.

Clearly, communication is an essential function in technology organizations. For example, software development companies require teams of informational communicators to create documentation; although they focus on exposition, these manuals are also persuasive in that they work to construct a company's image and identity in the eyes of users. While persuasion may be only a secondary purpose of manuals, persuasion is a central purpose of many of the communicative acts that occur in technology-focused organizations.

At the research and development stage, engineers must convince management that their designs are useful, practical, and profitable. Most important, a product once built must also be sold. As such, sales and marketing professionals must persuade potential users that they should purchase it (without customers, manuals, as well as paychecks, need not exist). While some of this persuasion takes written form, much of it happens in interactive presentations, often facilitated by multimedia.

Persuasive technical presentations occur both internally and externally, reaching the organization's highest levels. Internally, CIOs must persuade other senior executives (who often lack an equal affinity for technology) to fund new technological initiatives. Externally, sales teams and subject matter experts give persuasive presentations to corporate executives—presentations in which multimillion dollar contracts are on the line. Given these stakes, professional communicators skilled at persuasion (in addition to exposition) can position themselves in leadership roles within their organizations.

> Persuasion depends on gaining credibility and authority.

In many ways, informational and persuasive technical communication are similar. Both of these modes of technical discourse depend on close audience analysis and on the ability to present complex ideas clearly. There are, however, several challenges that are unique to presenting technical information persuasively.

1. Argumentation

In persuasive situations, one must move beyond explaining how a technology works to inventing arguments for why an audience should adopt it. Rather than structuring their presenta-tions in terms of step-by-step instruction, persuasive communicators must craft their presentations as extensive evidence-supported arguments for the application of technology in a particular context. Specifically, persuasive presenters must demonstrate thorough knowledge of the audience's technological requirements, craft a clear message underscoring their ability to meet those requirements, support this message with detailed evidence or examples, and ultimately address and refute other alternatives.

2. Business/Organizational Focus

Technology does not exist in a vacuum; it is developed and refined to meet specific contextual requirements (for example, routers and toilets are not easily substituted). In much technological exposition, however, contextual factors—the problems solved by the technology—tend to fade into the background. In many cases, the audience for an informational presentation already understands how the technology serves particular purposes; what they really want to know is how to use it. In persuasive presentations, however, the focus must remain on the business/organizational context. For every feature of the technology that they describe, persuasive presenters must highlight ways in which this feature serves broader organizational missions. Above all, the presenter must answer the evaluator's primary question: *How does this new widget or service help my company?*

3. Audience Interactivity

In informational presentations, speak-

ers tend to interact with their audience to gauge their level of expertise and to check their understanding of the material. In contrast, persuasive technical presenters must construct audience interactions that forge the way for a strategic partnership between a technology provider and the decision maker's organization.

To do so effectively, persuasive communicators must conduct extensive audience research to discover varying levels of technical knowledge, to identify the key decision makers, and to understand the critical factors that ultimately influence their decisions. Despite this preparation work, persuasive presenters must remain nimble. During the presentation, the customer must have an opportunity to direct the conversation to meet his or her own needs. Should the conversation go in an unexpected direction, the persuasive presenter (and his or her support team) must be able to adapt and change, recognizing that meeting immediate customer demands is always more important than holding steadfast to a set of presentation slides.

4. Ethos

To be successful, all speakers must gain ethos (credibility and authority) with their audience. In informational presentations, speakers tend to gain their ethos by stating their expertise in the subject area and by providing useful, comprehensive, objective information. For persuasive presenters, however, the process of gaining ethos is more difficult. While audiences typically presume that informational presenters are speaking objec-

tively, they know that persuasive presenters have an agenda; thus, audiences are much less likely to inherently trust persuasive presenters (including recognized experts). While persuasive presenters have a responsibility to propound their product's benefits, they also must consciously avoid sounding like mindless talking brochures or spin doctors. Instead, they must provide the audience with useful (and relatively neutral) consultative advice about the full range of technological options while not losing sight of their broader persuasive purpose. This is a difficult balance. Going too far toward playing consultant means the presenter risks selling the customer on a solution his organization may not provide. Equally bad, however, appearing too partisan and one-sided may lead to a significant loss of the ethos required to speak authoritatively about his product's benefits.

Subsequent columns will address these and other issues unique to the task of effectively presenting technical information for persuasive purposes — a skill that is critical in today's business environment. Our hope is that the interdisciplinary insights we offer in this area will prove helpful in your continued professional growth and success.

Paul, an AT&T employee and information systems doctoral student, is a subject matter expert and frequent presenter on networking technologies, specifically virtual private networks. Jason is an experienced professional writer/trainer and a graduate student in rhetoric and professional commu-

nication at Ohio State University. Paul can be reached at tuten@ nova.edu; Jason is available at palmeri.2@osu.edu.

Highlights of AdCom

(continued from page 5)

Planning for the three years to come is on track. For IPCC 2003 in Orlando, Florida, conference chair Sherry Steward invited Peter Kincaid, known among other reasons for the Flesch-Kincaid readability test, as keynote speaker. Look for the call for papers on page 17 in this *Newsletter*, in the December issue of our *Transactions*, or visit the conference Web site at *http://www.ieeepcs.org/2003/*. For IPCC 2004 in Minneapolis, Minnesota, conference chair Bernadette Longo is exploring a cosponsorship by the local chapter of the Society for Technical Communication. And for IPCC 2005, Ireland is confirmed as an attractive venue, perhaps with a specialty conference in the United States earlier that year.

Future Meetings

In 2003, the AdCom will convene by conference call on 25-26 January; in Dallas, Texas, on 17-18 May; and in conjunction with IPCC 2003 in Orlando, Florida, on 20-21 September.

All PCS members are welcome to attend AdCom meetings. Interested in seeing your leadership at work? Just get in touch with the PCS secretary for practical arrangements.

Jean-luc Doumont is PCS secretary.
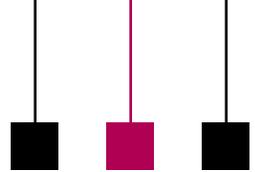
PCS Awards

(continued from page 1)

Univ. Press, 2000) and *Technical Communication* (McGraw-Hill, 1999). She also is author of nearly 100 other books, refereed papers, presentations, etc., many of which show her special interest in gender issues and technical communication.

Goldsmith Award
Edward R. Tufte

Edward Tufte is professor of political science, statistics, and computer science at Yale University, New Haven, Connecticut, where he teaches statistics, graphic design, and political economy (1977-present); he is also senior critic in graphic design at Yale. He holds a doctorate from Yale (1968) and M.S. and B.S. degrees from Stanford University (1964).

Dr. Tufte has prepared evidence for several jury trials and has worked on information design and statistical matters for IBM, *The New York Times*, *Newsweek*, Hewlett-Packard, CBS, NBC, the Bureau of the Census, the Bureau of Justice Statistics, International Paper, and New Jersey Transit. He is a fellow of the American Statistical Association and has held fellowships from the Guggenheim Foundation and the Center for Advanced Studies in Behavioral Sciences.

Dr. Tufte's graphical interpretations of complex data have made a great impact on how people communicate visually; his work has been described as "a visual Strunk and White" (a bible for technical communicators). His best known books are *Visual Explanation* (1997), *Envisioning Information* (1990), and *The Visual Display of Quantitative Information* (1983), all from Graphics Press, which he founded in 1983. *Envisioning Information* has won 10 prizes for content and design including awards from ACM, Phi Beta Kappa, and International Design. Dr. Tufte was this *Newsletter*'s Master of Style (by Ronald J. Nelson) in the July/August 1997 issue.

Schlesinger Award
George F. Hayhoe

George Hayhoe recently became professor of technical communication and director of the M.S. degree program in TC management in the school of engineering at Mercer University, Macon, Georgia, where his interests include online documentation, software interface design, and document usability. His doctorate is in English from the University of South Carolina (1979) and he also holds master's (1973) and bachelor's (1972) degrees in English. He is head of George Hayhoe Associates, a technical communication consulting company (1995-present).

Dr. Hayhoe is a fellow of the Society

George Hayhoe, Beth Moeller

for Technical Communication (1997-present) and has edited its journal, *Technical Communication*, since 1996. He is author of numerous refereed publications and presentations and has received several awards for technical art and publication excellence (1992-2001). He was appointed to the periodicals committee of the IEEE Technical Activities Board in 2000.

Dr. Hayhoe was secretary (1997), vice president (1998-1999), and president (2000-2001) of the Professional Communication Society, and on its AdCom since 1993. He chaired IPCC 95 in Savannah, Georgia, and is program chair for IPCC 2004 in Minneapolis, Minnesota. During his AdCom service he undertook a major revision of our constitution (1996) and bylaws (1997), with refinements in 1999, and later spearheaded the development of a multiyear strategic plan for the society (2000).

Joenk Award
Zahedi, Van Pelt, and Song

Fatemeh Zahedi is Wisconsin Distinguished Professor (1997-present) in the school of business, University of Wisconsin–Milwaukee, where she teaches executive MBA courses in DSS and groupware, intelligent systems and data mining, MIS, Java, and other topics. She received a doctorate in business administration from Indiana University in 1975 and also holds two master's and two bachelor's degrees. She received outstanding teaching awards from those two universities. Prior to the University of Wisconsin, Dr. Zahedi was

professor and chair of the MSIS department at the University of Massachusetts–Boston. In the late 1970s she founded and was director of the operations research bureau for the government in Tehran, Iran.

Dr. Zahedi has published six books with a seventh forthcoming: *Intelligent Information Systems* from Sage Publications. She is author of 43 refereed publications and of numerous presentations and research monographs. She is associate editor of *Information Resources Management Journal* and is on the editorial boards of five other publications.

William Van Pelt is associate professor of English (1990-present) at the University of Wisconsin–Milwaukee where he teaches technical writing, writing for information technology, contemporary rhetorical theory, advanced composition, Romantic literature, and other courses. His doctorate is from the University of California Santa–Cruz (1983) and he holds master's and bachelor's degrees from UC–Riverside. Prior experience includes consulting and computer and programming documentation at Bechtel Engineering Corp., Intel, and Motorola.

Primarily interested in technology and the writing process, Dr. Van Pelt has coauthored three books and has written 17 refereed papers and book contributions, several book reviews and in-house manuals, and 30 professional presentations.

Left:
William Van Pelt, Fatemeh Zahedi, Kim Campbell

Below:
Awards luncheon

Jaeki Song is an assistant professor in the information systems and quantitative sciences department at Texas Tech University, Lubbock, Texas, where he teaches information technology of e-business and Java. He received a Ph.D. degree in management information systems from the University of Wisconsin–Milwaukee (2001). He also holds master's and bachelor's degrees in economics. Dr. Song specializes in e-commerce and his research examines e-business strategies including electronic marketing and Web design, emphasizing important factors for selecting the appropriate market strategy and how an individual's belief system is influenced by Web contents. Other research interests include economics of software development, adoption of information technologies, and Web-based decision support systems. He has published and presented at numerous conferences, primarily in the field of information systems.

How the Awardees Are Chosen

Nominations for the Goldsmith, Blicq, and Schlesinger awards may be submitted by the PCS membership. The final selection is made by the administrative committee (AdCom). The best paper award is determined by the editorial advisory committee.

Previous award winners from 1997 forward are identified in the July/August and September/October 2002 issues of this *Newsletter*. Pre-1997 awardees are listed in the May/June and July/August 1997 issues.
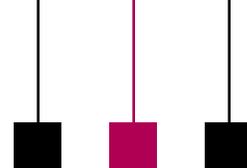
Compared to What?

Much of my recent vacation in Northern Spain was devoted to hiking the stunning landscapes of Picos de Europa (the peaks of Europe), a national park overlapping the communities of Asturias, Cantabria, and Castilla y León. An exceptionally sunny day brought us to Fuente Dé, a place known for its *teleférico* or cable car—the type that hangs from a cable, not the type that climbs the steep streets of San Francisco. This *teleférico*'s claim to fame, or so I read in the flyer I received, is being the world's third largest, climbing 750 meters in one span.

Interesting as it was, the cable car's ranking raised more questions than it answered, at least to our inquisitive minds. "Third largest?" my wife commented, "I wonder where the world's largest and second largest are." "Yes," I concurred, "and I wonder how large those are, compared to this one." While I did not say so out loud, I also wondered what "large" referred to: the size of the cabin, the length of the cable, the difference in height? Who knows?

The lack of a proper reference point plagues communication, whether professional or otherwise. As a stereotypical example, commercial ads routinely praise products for being "better" or "cheaper" (than what?). Similarly, the cashier of a U.S. supermarket I recently stopped at highlighted on my receipt the amount I had saved by shopping there. I'm still wondering: shopping there, as opposed to…where?

> The lack of a proper reference point plagues communication.

Research articles and engineering reports frequently suffer from lack of a comparison point in two places: the introduction and the conclusion. The problem is more acute still in the abstract or executive summary, where the comparison point is omitted, authors argue, for lack of space. While the objection seems logical, the result is ineffective, especially for the less specialized readers.

The introduction of reports or articles normally attempts to motivate the audience by stating the need for the work or research. One way or the other, this need corresponds to a gap between actual state and desired state. Many documents, however, limit themselves to stating the purpose of the work or research, that is, the desired state. Yet the motivation is not in the desired state only; it is in the gap. Although specialists may know the actual state or be able to infer it from the desired one, the argument loses strength for lack of an explicit comparison point.

As a case in point, every year at a major Belgian university, various faculty members and I work with engineering students on the oral presentation of their undergraduate theses. We encourage them to build motivation into their work, but few of them go beyond the sole purpose, with such statements as "our goal is to find a new algorithm for…." Even the specialists in the audience then ask, "What's wrong with the current algorithms?" a question students find themselves ill-prepared to answer.

The conclusion of reports or articles, supposed to interpret the findings in view of the need, suffers even more frequently from incomplete or missing comparisons. Yet the comparison is at the heart of the interpretation. When readers learn, for example, that the new catalyst allows the chemical reaction to take place at 235ºC, they want to know whether this is better or worse than with the old catalyst, and whether the difference is large or small. Specialists might be able to guess, of course, but leaving the interpretation to the reader is taking the risk that the message not get across accurately—if at all.

Accurate comparisons fulfill three requirements. First, they require relative values, such as "20 percent faster than" or "four times as large as." Relative values do not exclude absolute ones, which specialists might still find interesting. Second, they require a meaningful comparison point. Clarifying, for example, what a bushel is by stating that it is four times as large as a peck does not help those who do not know what a peck is. Third, they require clear criteria, stating what exactly "fast" or "large" refers to. All three of these requirements were missing in the flyer of the *teleférico de Fuente Dé*.

Dr. Jean-luc Doumont teaches and provides advice on professional speaking, writing, and graphing. For over 15 years, he has helped audiences of all ages, backgrounds, and nationalities structure their thoughts and construct their communication (http://www.JLConsulting.be).

Beyond Writing

By Michael Brady

Sometimes I wonder if writing has withered in the wastelands of cyberspace. Even on the home Web sites of organizations obviously trying to sell themselves, essentials often are missing or are submersed amid glitzy graphics and tangled texts.

Fortunately, there are exceptions: uncluttered, clear Web sites that put the basics up front, the Internet equivalent of printed works that instantly grasp and hold reader attention. My nomination for the champion of clear Web site communication goes to Bruce Mau Design (BMD) of Toronto, Ontario, Canada, for the *http://www.brucemaudesign.com* site. Its first page comprises the name, address, and telecommunications numbers of the company (the information that most visitors seek). The second page links to the deeper details of the company's offerings and workings. And it's all black-on-white, easily readable and printable.

That simplicity springs from the work of Bruce Mau, now one of the world's most public designers. But its roots are deeper. After a stint at the College of Art and Design in his native Ontario, Mau started in his chosen discipline of design. But he soon concluded that the culture of communication is subject to Darwinism. If the printed media were to decline, as was predicted early on in the digital age, it would be because they failed to adapt. He reasoned that the requisite adaptation required going beyond writing and paying closer attention to the choreography of the *pas de deux* of text and image that make up a finished product. So, in 1985 at age 26, he started his own design firm, equipped with some experience and a new, theretofore untested theory.

The theory saw its first test in Mau's design for Zone Books, an avant-garde New York publisher. Now, some 106 titles later, he remains the design director, and Zone Books is associated with the MIT Press. The exploration with Zone Books that proved the theory led to an atypical career in written communication. His academic credentials have become impeccable: He has served on the faculties of Toronto's School of Architecture; Rice University in Houston, Texas; the California Institute of the Arts in Valencia; the Getty Research Institute in Los Angeles, California; and the Netherlands Architecture Institute in Rotterdam; and he has lectured throughout North America and Europe. Yet he prefers off-the-cuff organization to academic discipline. And he has continued to refine his concepts of communication, as he sees a clear common denominator in all communications, be they on paper, as in a book, or in the open, as in the design of a public park.

That view first surfaced in his work with the Dutch architect Rem Koolhaas on the communication project that became a book, *S, M, L, XL* (New York, Monacelli Press, 1995, ISBN 3-8228-7443-3), a giant lum-

> The culture of communication is subject to Darwinism.

beryard of views of architecture and the myriad ways it affects us all. That led to further cooperation with Koolhaas and with other architects, including Frank O. Gehry and Michael Maltzan. By the year 2000 his works had become sufficiently extensive to fill a 624-page monograph, *Life Style* (New York, Phaidon Press, 2000, ISBN 0-7148-3827-6).

Throughout, Mau has shared his recipes openly. At the 1995 Doors of Perception Conference (PCS *Newsletter*, Nov/Dec 2000, p. 8), he put forth *An Incomplete Manifesto for Growth* (downloadable from the BMD website), a list of 43 tenets for the creative life. Some of the tenets paraphrase the rules of good writing, such as the commands to study (no. 7) and to listen carefully (no. 32). But some countermand received wisdom, such as the instructions to capture accidents (no. 6) and to avoid fields and jump fences (no. 40).

Mau has proven that departures from well worn ways work in practice. In May 2000, when his studio in Toronto sought a new staff designer, he and studio manager Jim Shedden departed from the conventional approach of placing a help-wanted ad in the newspaper, reviewing applications and CVs received, and interviewing the most promising applicants. Instead, they wrote a cultural test of 40 questions covering contemporary arts, films, and literature and incorporated it into the ad. After run-

Check Out Data-driven Web Sites

By Elizabeth Weise Moeller

Having created data-driven Web sites and having talked to people who create data-driven Web sites, I've learned a lot. Some projects move along very well. Others hit a few bumps in the road. The difference between the two? The clients with smooth-sailing projects know exactly how they want the site to work, what they want site users to see onscreen, and what data they want to receive from the Web site. The problems with the other projects can be boiled down to one theme: vague definitions. The clients don't really know what they want users to do or how they want the data returned to them.

> A poorly implemented data-driven site may be worse than no site at all.

What is the best way to prevent bumps in the road? My company has found that the best way is to ask lots of questions. The questions depend on the nature of the data-driven site, and the answers help make the project move more smoothly.

Data-driven Web Site Definitions

You can classify data-driven sites in two categories: data retrieval sites and data entry sites. *Data retrieval sites* are Web sites for which the site owner has provided a database of information and the pages are generated on the fly based on user preferences. A good example of this is the FedEx package tracking site (*http://www.fedex.com/us/tracking/*). A user enters his or her tracking number and the Web site returns the package status.

Data entry sites are Web sites on which the site owner is collecting information from the user. For example, we are working on a site on which users participating in a program are expected to complete semi-annual reports online. The users enter the data and it is then retrieved by their system for reporting purposes.

Each type of site has its own challenges. The following checklists are useful to site owners, designers, and programmers to make sure everyone has the same vision for the site, the data retrieved or collected, and the user expectations.

Data Retrieval Checklist

In my opinion, data retrieval sites are often simpler to create than data entry sites. Definitions for the former can be a little less specific than those required for the latter. However, a clear understanding of users' needs and back-end maintenance are important. The following checklist can help.

- **Users' need for data defined?** Have you defined who the users are and *why* they need the data? If you cannot answer why users need this data, maybe you're just wasting money on this project.

- **Users' data requirements defined?** Have you defined what data the users need to complete their task and in what format this data is most useful? You need to define the data

fields people will see and in what format they will see them.

- **User interface defined?** What process will users go through to retrieve the data they are looking for? What fields can they search on? It's important to remember that users cannot use a data retrieval site if they don't have any information at all. You need to either provide them with clues (e.g., a drop down box of options) or request something from them (e.g., a tracking number).

- **Data source defined?** Have you defined your data source (e.g., an in-house Access database)? Is it already created? If it has been used for a while, has it been cleaned up recently? Data sources that have been in use for more than six months should most definitely be cleaned up to remove duplicate or bogus entries.

- **Data source maintenance defined?** How will new data reach the Web site? Will you upload a new database automatically at a prescribed time of day? Will you manually send updates to your Web developer? Will your data be stored so that your site can access it? Are there any special requirements if the data is going to be stored inside your firewall? The most important aspect is knowing how to keep the data current.

Data Entry Checklist

Data entry sites are often more complicated than retrieval sites because

you need to thoroughly define what the site owner wants to do with the data once it has been received.

• **Owner's need for data defined?** Do you know why the site owner is collecting this data? If the owner cannot answer this question, he probably doesn't need to collect the data.

• **Data formats defined?** What kind of reports does the site owner need to produce based on this data? How will the data be coded when it is sent from the Web site so that these reports can be generated? This is the most difficult part of the project and needs careful planning. Everything, down to date formats, needs to be reviewed to make sure that the person collecting the data can actually use it and run accurate reports when she receives it.

• **User interface defined?** What will the users see? How many screens will it take to enter the data? Will they be able to see data they had previously entered? How will they interact with the forms? It is important to know what process the users will go through to submit the data.

• **Export method defined?** How will the data get from the Web site to the person who needs to create the reports? Will the data be collected on the Web server and periodically exported to another server? Will the site tie into the company database for live updates? Are there firewall issues involved? Will the software

used internally be compatible with the Web server formats? Will you create a special interface and run the reports online?

I have seen a variety of solutions to this issue. For applications that are not time-critical, the data is often stored on the Web server and periodically sent to the person creating the reports. For time-critical applications, the data is stored in the company database for real-time transactions.

• **Data maintenance defined?** Who will maintain the data and how will you clean out this data source? What happens to duplicate or incomplete entries? Will data validation routines check the data as it is entered? This is another very important aspect of the data entry site and can affect the way the site is programmed.

While these checklists are not 100 percent complete, they may provide you enough information to start thinking about all the implications for data collection or retrieval Web sites. Data-driven sites can be very beneficial to both the business and the customer. However, they take *very* careful planning and execution. In many instances I've found that a poorly implemented data-driven site is worse than no site at all.

Elizabeth Weise Moeller is president of PCS. She owns Interactive Media Consulting, LLC (+1 518 587 5107, beth@imediaconsult.com), a World Wide Web and Internet training firm in Saratoga Springs, New York, which provides Web-site design and Internet training for businesses in the northeast.

Omniz CD-ROM Courses

Omniz Global Knowledge Corp. has become an IEEE Education Partner. IEEE members can continue their life-long learning with computer-based courses provided by Omniz at a 10 percent discount.

Currently there are six technical courses which are presented in a combination of CD-ROM and print and were developed by IEEE Fellow Michel Nakhla and Member Ram Achar at Carleton University in Ottawa, Ontario, Canada. Generally centering on signal integrity, topics include macromodeling, spice-based simulation, transient analysis, and Krylov subspace techniques.

Applications, course prerequisites, and systems requirements are detailed at the Omniz Web site for IEEE members: At *http://www.ieee.org/ EduPartners*, choose Omniz among the university partners. You must use your IEEE member number to receive the 10 percent discount.

To learn more about the partners program contact Sasha Eydlin, *s.eydlin@ieee.org*.
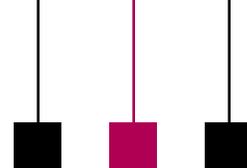
How to Write Readable Reports and Winning Proposals

Part 4: Internal Proposals That Move Decision Makers

People with great ideas for their organizations are often shocked to find those ideas rejected by management. They come to see management as unimaginative, unresponsive, or blinkered, but the real problem may be their own inability to write a persuasive proposal. Here we show you how to avoid common traps and to construct an internal proposal that stirs up decision makers.

Some Myths and Truths About Internal Proposals

Take an honest look at your beliefs about internal proposals. Do they fit more with the following myths than with the truth?

Myth #1: It's easier to get money for technical projects from my own management than it is to sell an external customer on a project. In truth, most managers who control the money are looking for solutions to major headaches. Unless you show them a burning problem, they're not going to spend a penny. The only sense in which internal proposals may be easier than external ones is that their *format* is often less complex.

Myth #2: Internal management appreciates creative projects or approaches. Researchers, project engineers, and technical professionals in general like to experiment with new ideas and therefore present the creativity of a project as a selling point. However, people who control the money (and are held accountable for it) usually prefer *certainty:* "If

I spend x, I'll get y back within z months."

Myth #3: If I point out a problem the organization is facing, management will be eager to get it solved. In truth, decision makers are conservative; they will cling to the status quo as long as it seems safe and profitable. If you point out a problem, they may deny it, blame you or somebody else, or wait for it to go away—anything but fund your idea. The key is to show, in logical, financial terms, that the status quo is *not* safe and profitable.

Myth #4: If I show that a pressing problem exists and offer a cost-effective solution, management will act. Chances are, management will still not move. Why? Because there are better investments for the company's limited money. It's just like the stock market: Many stocks may promise to satisfy your need to grow your savings, but you'll probably pick those that offer the biggest (though still safe) return in the shortest time. To persuade management to invest in your solution, you must present an attractive breakeven point after which your solution will save or make money.

An Effective Approach to Internal Proposals

The following five-step approach can give your proposals a good chance, because it is built on the truth about management's attitudes.

> Your package must include a problem that hurts, a cost-effective solution that follows a proven path, and an attractive breakeven point.

1. Define the problem to be solved. *What* exactly is it? How *much* is it costing us? (*Advice:* Go for big problems that are causing a lot of pain; solving those will build your credibility and reputation.) *When* and *where* does it occur? (*Advice:* Think big. Does the same, or a similar, problem occur in several areas of the organization beside the one you initially considered?) *Why* is it occurring? If we don't solve the problem, how much will it cost us over the next year or several years?

2. Present an effective solution. Briefly describe several possible solutions. (*Advice:* State the pros and cons of each objectively. This demonstrates that you have thought about the problem and are not offering your first half-baked idea.) Then recommend one idea as the preferred course of action. Finally, explain your plan of action by describing (1) the specific steps to be taken, (2) who will be involved, (3) what resources will be needed (both human and technical), and (4) when the plan will be implemented (include a time line or Gantt chart if the project is long or complex).

3. Present cost information. This should include detailed budgets for the specific *steps* to be taken, *people* involved (internal/external consultants, support personnel, etc.), and *technology* required (equipment and services).

PCS Pastiche

By Rudy Joenk

A 40-year pastiche appeared in the November/December 1997 *News-letter*; this five-year update acknowl-edges PCS's 45th year.

Administrative Committee (AdCom)

The size of the AdCom was reduced to 18 members from 21 effective 1998.

June 1998 saw an e-mail experiment go wrong. In an effort to establish communica-tion with members, a *dialog* (two-way) LISTSERV was unknowingly used instead of a *broadcast* (one-way) LISTSERV. Members were soon inundated by a repeating cycle of mes-sages started by a few auto-matic "out of office" notices. We're treading very softly now so on our Web site, *http://www.ieee pcs.org/subscribe.php3*, there's an opt-in list for a forthcoming online newsletter.

The PCS–Popov Society cooperation agreement first signed in 1993 was renewed at the Québec, Canada, meeting, September 1998.

The PCS Web site was established at the end of 1998; continually being improved, it is now located at *http://www.ieeepcs.org/*.

The AdCom elected its first member from outside North America: Tom van Loon from The Netherlands; Tom served 1999-2001. Then Jean-luc Doumont from Belgium was elected to serve 2002-2004.

The colorful little man with the wide tie that was the graphic symbol of IPCC 99 in New Orleans took first place for promotional materials design in STC's 1999-2000 Inter-national Technical Art Competition.

PCS's allotment of IEEE Third Millennium Medals was awarded in 2000 to Ron Blicq, Roger Grice, Rudy Joenk, Bill Kehoe, James Lufkin, Herb Michaelson, Joan Nagle, Richie Robinson, Stephanie Rosenbaum, Scott Sanders, and Emily Schlesinger.

A five-year Technical Activities Board review of the society and its publications was held in Vancouver, Canada, in June 2000. The official report was long in coming but held basically good news for the society.

For the first time, PCS award winners became eligible for travel support beginning with IPCC/SIGDOC 2000.

A new PCS logo was created and used first on membership brochures distributed at IPCC/SIGDOC 2000.

The first online AdCom meeting was successfully held 20-21 January 2001.

An international colloquium was held with the Popov Society in Suzdal, Russia, 15-16 August 2001. The PCS Popov agreement was again renewed. Reports are in the November/Decem-ber 2001 *Newsletter*.

Amendments to the PCS constitution and bylaws in late 2001 provided for election of three AdCom members annually beginning 2002 by the membership at large, via the Web site or by postal mail. Participation this year was disappointingly low (see the President's Column in this issue).

Newsletter

Results of a 1999 survey on the Web and in the *Newsletter* indicated that the top three features are Tools of the Trade, one-time articles, and Masters of Style.

Long-time (issue #1-1987) columnist Cheryl Reimold (Tools of the Trade), who was joined by her previously anonymous coauthor Peter Reimold in late 1999, breezed through this half-decade as did new (1997) col-umnists Michael Brady (Flocci-naucinihilipilification) and Ron Nelson (Masters of Style); Joan Nagle's last Curmudgeon's Corner was in the #5-1997 issue; it began in the #1-1990 issue; Beth Moeller (Net Notes) and Professor Grammar debuted in late 1998, and Jean-luc Doumont (Good Intent, Poor Out-come) in mid 1999.

Shorter-term columnists were Hanspeter Schmid (Black Tools) #2-1999–#2-2000; Vicki Hill (Audience Quest) #2-2000–#3-2001; Julia Land (Working Freelance) #3-2000–#5-2001; and Eliza Drewa (Writer-Editor Relationship) #3–#5-2002. Aperiodic columnists Dan Danbom and Wen Smith use humor to highlight the foibles of communication.
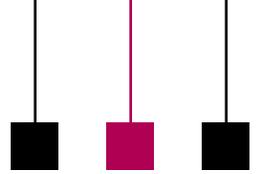
Web-site posting of PDF files of the *Newsletter* began with the January/February 2000 issue. E-mail addresses, URLs, and table-of-contents entries are active.

A simple copyright notice was added to the boilerplate on page 2 beginning with the November/December 2000 issue. It allows free copying for non-commercial use and does not require authors to transfer copyright to the IEEE, nor does it restrict them in future use of their material.

With the first issue of 2002, *Newsletter* readers saw **red**. That's when we implemented a refreshed design including (in addition to color change) new headings and highlights and a three-column format. Back in 2001 we had a taste of a new color when the March/April issue was accidentally produced in blue instead of the then official green.

Transactions

By contract, resulting from an RFP (PCS's first), Kim Campbell and the University of Alabama–Tuscaloosa became the *Transactions*'s editor and editorial home, effective 1998.

The new appearance and integrated two- and three-column format of the *Transactions*, which debuted in the June 1997 issue, somehow was not mentioned in the 1997 pastiche. In 2000 a trio of document design experts performed heuristic evaluations and concluded that the new design is far superior to the old. Their

recommendations have been implemented along with some reader suggestions.

Starting with the March 1998 issue, the *Transactions* was available online to members through OPeRA, the Online Periodicals and Research Area of IEEE periodicals. More recently, the successor *IEEE Xplore* provides full text of all issues from 1988. On the PCS Web site, *http://www.ieeepcs. org/transactions/*, are abstracts of all articles from 1996.

Results of a 1999 survey on the Web and in the *Newsletter* indicated that the top three *Transactions* features are research articles, editorials, and book reviews. An earlier survey of reader characteristics was published by the editor in her June 1998 issue.

PCS and the Society for Technical Communication published a joint issue of the *Transactions* and *Technical Communication* in March 2000, which later received an APEX publication award.

Tools of the Trade

4. Project financial results. Contrast the *cost of solving the problem* with the *cost of **not** solving the problem*. When will the organization begin to profit from this proposal? (*Advice:* Resist the temptation to inflate your projections. It is better to be seen as conservative than as overly optimistic.)

5. Ask for the order. Close by asking for permission to start the project. (*Advice:* Use this as an opportunity to repeat the main benefits of implementing your solution.)

Cheryl and Peter Reimold have been teaching communication skills to engineers, scientists, and business people for 20 years. Their firm, PERC Communications (+1 914 725 1024, perccom@aol.com), offers businesses consulting and writing services, as well as customized in-house courses on writing, presentation skills, and on-the-job communication skills. Visit their Web site at http://www.allaboutcommunication.com.

Beyond Writing

ning just once, the ad brought 150 replies; Mau and Shedden interviewed the 15 with the highest test scores and rapidly found the perfect match for the vacant staff position.

Even academia now has recognized the worth of the author, teacher, and public speaker who cannot be pigeon-

holed. In 2001 the Emily Carr Institute of Art and Design in Vancouver, British Columbia, Canada, awarded Mau an honorary doctor of letters degree. For those of us who fiddle with letters daily, that's sufficient cause to believe that a contributory component to success in our calling may lie beyond writing.
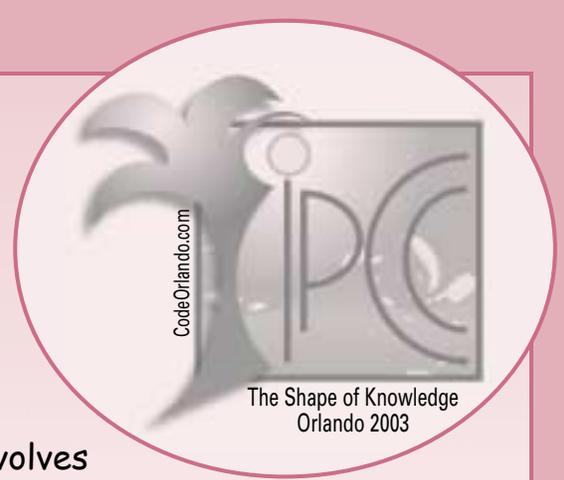
Call for Papers

IPCC 2003 - The Shape of Knowledge

International Professional Communication Conference
Orlando, Florida, September 21-24, 2003
Presented by IEEE Professional Communication Society

The Shape of Knowledge
Orlando 2003

CodeOrlando.com

Communication in the technical and professional realm involves giving shape to knowledge. As communicators and engineers, we synthesize information from many sources to create new practical knowledge. Engineers and subject matter experts give shape to knowledge, while professional communicators give new form to knowledge gained from such experts. We also creatively mine databases for inapparent knowledge. We respond to feedback from users, too, by reshaping existing knowledge. In these ways and more, we play a crucial role by transforming shapeless data into useful knowledge.

Conference:

We invite you to explore how professional and technical communicators and engineers give shape to knowledge in a wide range of technical fields. Share your knowledge, experience, and interests. Please join us at IPCC 2003 in Orlando, Florida, September 21-24, 2003.

Topics:

We are looking for individual papers in three broad areas, with suggested topics listed below. We are also interested in papers and workshops of general interest to our membership of professional and technical communicators and engineers.

Sources
- Collecting information
- Identifying sources
- Managing information
- Managing knowledge
- Repurposing

Users and Applications
- International environments
- Organizational challenges
- Simulation and training
- Research methods
- Potential research areas
- Usability
- New technologies
- Special environments such as cell phones and PDAs

Shaping
- Language use
- Rhetoric
- Document design
- Information modeling
- Theories and their applications
- Professional development
- Interface between academics and other professionals
- Ethics
- Mining information
- Repurposing

Submissions:

Proposals for individual papers and workshops, IEEE Professional Communication Society, should be postmarked by March 15, 2003 to:

Paul Dombrowski, IPCC 2003 Program Chair
Department of English
P.O. Box 161346
University of Central Florida
Orlando, Florida 32816-1346
E-mail: *pdombrow@mail.ucf.edu*
Visit our Web site for information about the society, conferences, and membership: *http://www.ieeepcs.org/2003/*

Portland, Oregon

IPCC 2002 was held at the Portland Marriott City Center Hotel, a hotel well sized for this conference. In addition to being known as the City of Roses (unfortunately, we were out of season), Portland is home to the internationally known Powell's Books and it provides a great light-rail ride from the airport to Pioneer Square near the Marriott for USD 1.55.

Heidi Adkisson

Kurt Cagle

Marshall Bloom

David Beer, Jean-luc Doumont

Thom Haller

Beverly Arnoldy

Shan Osborn

Portland Marriott City Center Hotel

Deborah DeBord

Akihito Takahashi

Nancy Coppola

Paul Dombrowski

Robert Krull

Amy Aragones

Jo Mackiewicz

Stephanie Rosenbaum, Edwardo Clark, Marshall Bloom

William Hart-Davidson

Thom Haller, David Farkas, Mark Lewis

Mary Sue MacNealy

Mark Haselkorn

David Hailey

John Light

Mimi Adam

Thomas Orr

Katherine Durack

Pamela Novak

Kate Mobrand

Deborah Davy, Robert Nimchuk, Valerie Haas

IPCC poster in window

Cynthia Ryan

Jim Ramsay

Ashley Williams

Lia Quillico

William Van Pelt

Carel Jansen

Beth Kolko

Stephanie Rosenbaum

Marcia Rutherford

Gloria Reece

Charles Blackwell

Kris Freeman

Finance chair Paul Seesing

Helen Grady

David Farkas

W. K. Lee

Kathryn Riley

Ann Rockley

Judy Shenouda

Laura Schultz

Jean Richardson

Geoffrey Sauer

Alan Manning

JVA duo at banquet

Valerie Vance

Richard House
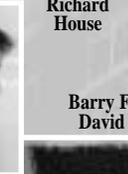
Barry Feinstein, David Farkas

Huatong Sun

Heather McNay

Don Zimmerman

Ben McKay

Geoffrey Elliott

Judy Strother

Michaël Steehouder

Nicole Amare

Victoria Mikelonis

Melissa McBurney

Dell Burner

Fatemeh Zahedi

Jennifer Turns

Steven Fraiberg

Al-Amir Restaurant

Mary Ann Krug

Kristina Ricks

Lia Quillico, Susan Feinberg, Jim Ramsay, Deborah DeBord, Victoria Mikeloris

Constance Kampf

Reflecting on IPCC 2002

By Laurel Grove, conference chair

Laurel Grove

IPCC 2002 was a great experience, and it was the people who made it great. Keynote speaker Thom Haller gave an exuberant talk that tied his history to those of all of us as professional communicators. "Who are we?" and "How did we get here?" are questions also of concern to PCS on our 45th anniversary. Thom's energetic enthusiasm was reflected among all of the attendees as they participated in sessions and continued their discussions in the hallways and common areas.

I was happy to see the amount of interaction among attendees, starting at the opening reception, which spilled into the corridor like the most festive of parties. Thursday's banquet brought people close again, trying new foods and hearing new music by Portland duo JVA. By Friday, groups of colleagues and new friends were heading together to the Swiss chocolate shop, sharing more than mutual professional interests.

In the several months before IPCC 2002, job pressures had taken an increasing toll on me: I began the week exhausted, burnt out, and unsure whether I was in the right profession. However, the energy and excitement shared by IPCC 2002 attendees were such that, after four extremely busy days, my doubts were gone and I was only exhausted. It was wonderful for me to be in such a supportive professional atmosphere.

In my opening talk I discussed the theme *Reflections on Communication* and ways that we use reflections of various kinds, from rearview mirrors to sonar echoes to the Hubble space telescope. One more important use of reflection is to define shape, as in the highlights that spark still-life paintings. *The Shape of Knowledge* is the theme of IPCC 2003, and I hope that the magic of IPCC 2002 continues in Orlando next year.

On Second Thought: Evaluating Web Sites

By David Farkas

Standard Creativity: Creating Flexible Web Development Standards

Shan Osborn and **Geoffrey Elliott** talked tactfully but candidly about the problems that arose at Pacific Northwest National Laboratory because of lack of Web development standards, the decisions through which they were given responsibility for devising and enforcing standards, and the challenges they faced and continue to face in getting staff to follow standards. Their efforts have resulted in much more maintainable HTML code, better Web site design, and compliance with the Federal government's section 508 standard for accessibility. Their presentation resonated strongly with many in the audience who encounter similar situations at their jobs. See the proceedings for valuable checklists and templates.

Identifying De Facto Standards for E-Commerce Web Sites

Heidi Adkisson is both an experienced consultant with Blink Interactive Architects and a graduate student in the University of Washington's department of technical communication. She described a rigorously systematic study of de facto guidelines in Web design based on her forthcoming master's degree thesis. Heidi analyzed 75 leading e-commerce Web sites and determined, for example, that the corporate logo linking back to the home page is always located on the upper left, but that the Get Help and Search functions appear in various locations. She discussed her study in relation to Jakob Nielsen's well known views about the need to follow standards. Also, she cast some doubt on Nielsen's dictum that "Web design is easy" because all the designer needs to do is look for and follow standards. Her highly detailed proceedings paper is an important contribution to the scholarly literature on Web design.

Mirroring the International Audience

By Eduardo Clark

Translation 101: Myths and Realities

The Germans remember President Kennedy by the famous phrase in his speech at the Berlin Wall in 1963: *Ich bin ein Berliner*. Well, our PCS secretary, **Jean-luc Doumont**, will be remembered, at least by IPCC 2002 audiences, by the phrase: *Ich bin ein Ventilator von Landmusik*. He was not, like Kennedy, expressing support for the people of (West) Berlin but translating the phrase:

I am a fan of country music, using a Web translation tool. With this, and other equally amusing examples, he debunked the myth that translation can be automated—at least reliably—without having to use simple unambiguous phrases that machines can understand.

Translation engines cannot understand English idiomatic expressions (any better than I can, as I am a nonnative English speaker) or translate sentences with the correct level of formality used in many foreign languages. The word *you* can be translated into Spanish as the informal *tu* or the polite *usted* depending on the context. Furthermore, the hidden plural in the word *you*, like when you say: "Hey, you *pluribus* guys," can be a real challenge for translation software. That's why in Texas we use the non-ambiguous *y'all* when referring to more than one person. Consider it our contribution to advancing the state of the art in communication.

Jean-luc not only warned us against using machine translation but also the unqualified human kind. Just as not every person capable of writing can be a professional writer or an editor, not every (native) foreign-language speaker can be a competent translator.

I believe that Jean-luc, being proficient in four languages (and this is not counting the declarative, procedural, and mark-up varieties), makes a very valid point. I don't believe that he really likes country music. However, I think that he is a great professional communicator anyway.

Preparing Material for the International Marketplace

Judith Strother discussed problems associated with the use of English as the de facto language for air traffic communication around the world. This includes bidirectional communication between pilots and air traffic controllers and among pilots themselves. Amusing but sometimes dangerous situations arise when nonnative English speakers are required to communicate in their often limited English. Accidents, like the one in Tenerife, Canary Islands, in which two Boeing 747s crashed on the runway, have occurred because of miscommunication; in that case between a Dutch KLM pilot and a Spanish air traffic controller. (Judith presented "Communication Failures Lead to Airline Disasters" at IPCC 99 in New Orleans, which describes the miscommunication that led to that tragic accident.)

Often, pilots and air traffic controllers who are not native English speakers lack vocabulary and have heavy accents that make communication difficult. Judith mentioned that even the Texas accent of some air controllers at the Dallas–Fort Worth airport can be challenging to understand by pilots with limited English skills and even by native English speakers. Occasionally, pilots and traffic controllers circumvent English-only regulations and communicate in their common native language. If a Korean KAL pilot is communicating with a Korean air traffic controller, both might feel silly speaking English, especially if they are not proficient in it. Furthermore, Judith pointed out that she was surprised to hear Belgian air traffic controllers repeatedly using the word *turkey* (while speaking English) on a recording of their communications. She later discovered that *turkey* was being used instead of *tango* to refer to the letter *T*.

And yet, in spite of great communication challenges, thousands of flights originate and end around the world every day with no greater problem than a delay or a misrouted piece of luggage. English still reigns as the lingua franca of air traffic communication.

Reflecting on Communication...Beyond Grammar and Words

By Roger Grice

Beyond Grammatical Correctness in Verbal Instructions

Robert Krull, professor of technical communication at Rensselaer Polytechnic Institute, presented a paper coauthored by **Bryan Watson**, a recent M.S. degree graduate of Rensselaer. They described the results of a search of psychology literature dealing with written instructions. While much of the teaching that is focused on writing procedural information focuses on clarity of language and logical sequence of instruction, the authors found factors such as the mental models that people form while performing the procedures and the point of view assumed by the steps of the procedure. Krull showed procedures that described an operation from one point of view (for example, looking at an object from the front) but illustrated it from another (for example, looking at the object from the rear). The audience was drawn into the discussion by asking them to visualize the perspectives used for a series of instructional examples.

Visual Communication: A Multi-Perspective Approach

Valerie Vance, professor in the communications department at Oregon Institute of Technology, took audience members on an interesting and informative tour of the range of possibilities for visual communication. Starting with a discussion of the components of visual literacy, Vance went on to describe ways of engaging students in a multi-perspective approach to exploring the possibilities available to

them for effective visual communication. She pointed out how our perceptions of information are so frequently shaped by artists and graphic designers and the importance of understanding the obligation to communicate visual information fairly, accurately, and clearly. Image analysis, she explained, is a cyclic process in which viewers move from an initial, often emotional, perception of an image to a more objective and thoughtful understanding.

Designing Effective Instruction

By David Farkas

The three presentations making up this session dealt with instruction from three very different perspectives.

Designing Decision-making Tools for Green Chemistry

Nancy Coppola teaches technical communication at the New Jersey Institute of Technology and has worked on various government and industry projects involving online instruction. She told of a very interesting project in which she supervised the development of online training to teach military chemists how to synthesize chemicals in the most environmentally friendly manner possible.

Nancy outlined the instructional and motivational strategies that underlie the training package. She also explained how Ph.D. degree students performed the key roles of content developer, visual designer, and multimedia developers. One of the strengths of this project is the extensive field testing of the online training, and Nancy told of some design issues that arose through the testing process.

Using Online Games to Self-test Web-based Instruction

Susan Feinberg is a professor of English at the Illinois Institute of Technology and director of its usability testing and evaluation center. **Lia Quillico** is a graduate student in the IIT M.S. degree program in information architecture. Their well planned and skillfully delivered presentation dealt with a project in which they evaluated and developed new content for the KidInvest Web site, which is used by K-12 teachers in the Chicago area. Among the strengths of the presentation was the clear presentation of the theory that guided their work. They drew upon both Cooper's cognitive load theory and Gardner's theory of multiple intelligences, and added game components to the Web site so students could achieve authentic learning using multiple forms of intelligence. This presentation sparked numerous questions and suggestions from the audience.

Managing Multi-directional Communication in the Online Classroom

Charles Blackwell, a business school professor at Nova Southeastern University, presented on behalf of four colleagues who have extensive experience teaching online. *Multi-directional* refers to communication directed (1) from instructor to student, (2) from student to instructor, and (3) among students. In addition to providing useful guidelines for successful online teaching, Charles included a personal dimension in his presentation. He made clear that successful online teaching requires a great commitment on the part of the instructor, especially in regard to availability to students. He, it seems, is rarely off duty, and he spoke of fielding e-mail questions from his students in his hotel room during the conference. We all admired his commitment to his students and certain academics in the audience felt pangs of guilt for being out of touch with students for four days of conferencing and travel.

From Technical Writer to Usability Professional (workshop)

By Debbie Davy

How to Conduct Your Own Usability Study

Beverly Arnoldy and **Kristina Ricks** said that to prepare for a study, determine what needs to be studied, whom you will study, and your budget. Current usability research indicates that the optimum number of people to participate in a usability study is from five to eight. Fewer than five won't show the trends, and more than eight is repetitive. They took care to point out that usability studies are a snapshot of a project at a particular time, not a market research tool.

In developing a study, it is important to have a clear budget guideline. Will participants be paid, or will they be given promotional items (such as pens, T-shirts) for participating? Screeners, those who select the participants, need specialized training. It is suggested that an average study take about 1.5 hours of the participant's time, and that five to seven user tasks be tested. Before the study, make sure that the room and equipment setup are optimal. Any observers should be cautioned not to speak unless they are

spoken to, not to leave the room after the study has started, and to avoid whispering, gesturing, or laughing (because the users may think they are the subject of the discussion). Also, a pilot study should be run at least two days before the real study.

Problems can occur when users get stuck on a particular task. You need to know in advance how to react, because with insufficient assistance users may get frustrated or upset, but once you tell them how to solve the problem you have lost the opportunity to learn why the task was confusing.

After the study observers should stay for a short recap session. It is a good idea to take notes on a flip chart so all can see, and to capture the good stuff before everyone leaves.

The Face in the Mirror: Research Examining the Field (panel)

By Debbie Davy

Technical communication is expanding far beyond traditional areas of writing, editing, and production. Research at the department of technical communication at the University of Washington now includes studies in tracking eye movement, how to communicate science and technology in the public arena, cross cultural patterns of adoption and usage of information technology, multimedia software for international communication, technical communication as a core engineering competency, usability, and even hypertext theory.

The Arthritis Source

Jennifer Turns illustrated the breadth of technical communication by describing some activities associated with one Web site development project, the Arthritis Source. The Arthritis Source was a grassroots project that started in 1985 to support learning about arthritis and provide authorized and credible information. In the Arthritis Source, subject matter experts create the content online via templates. The site offers question-based navigation, as well as user rating of content. From a technical communication perspective, the Arthritis Source represents effective audience analysis, authoring, and design process.

The EServer TC Library: Lessons from a Professional Resource

Jacques Lacan, a French psychoanalytic theorist, proposed the theory of the "mir-

ror stage" of child development in the 1960s. His theory described a point in an infant's development when the child becomes able to understand symbolic representations. This moment, Lacan argued, is incredibly important to a child's subsequent relationship with the world. One of the implications of this, developed subsequently by post-cultural linguists, was a theory of linguistic action in which the subject of a sentence is defined by predicates and objects; for example "I write software documentation" or "Technical communication constantly adapts." **Geoffrey Sauer** discussed the EServer TC Library as a mirror for technical communication.

Development Projects

Mark Haselkorn discussed development projects and how various factors, including management structures and practices, impact the risk of serious damage to

information and other critical infrastructures. Because of the multiple perspectives of people involved, the multiple roles of people involved, the multiple purposes of system use, and communication across organizational boundaries and across multiple organizations, Haselkorn postulated that technical communicators are the logical choice to lead development projects.

The rhetorical approach of technical communicators is essential to uncovering and addressing complex, critical, and ultimately human-centered issues. However, a disconnection between research in technical communication and application in industry exists. The technical communicator can address this disconnection by providing information relevant to a technical person. Technical communication is ultimately defined as a specialized discourse, not intended for the average reader, to help facilitate technical tasks.

Training That Reflects the World

By Julie Gephart

Practice What You Teach

Jim Ramsay maintains that communicators need to change an old adage, "Those who can't do, teach" to "Those who can do, should teach." Though he's first to admit that practitioners usually don't have time to teach, when they do they can make a valuable contribution. He brought his first-hand knowledge of tech-

nical communication to the university setting and drew several parallels between TC and instructional design:

- Use audience and task analyses; set clear objectives to meet needs

- Use appropriate tools and techniques to develop procedures and descriptions that give just enough guidance to achieve objectives
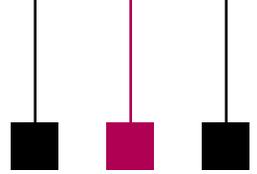
- Use a review process to verify correctness

- Seek opportunities for improving the efficiency of communication with and through surveys and readability or usability tests

The bottom line, Jim said, is that following their own best practices makes practitioners better teachers, and students benefit from learning by example. He encourages practitioners to teach and vice versa.

Developing Real-world Communication Skills in Noncommunication Classrooms

Jean-luc Doumont believes it's key to get engineers and other noncommunicators to understand early the importance of communication. He works with young engineering undergraduates in Belgium and notes, particularly in Europe, the absence of communication efforts or curricula. Traditional academic strategies aren't effective for the real world.

Jean-luc noted that professionals in all areas ideally:

- Motivate their audience: They include a purpose statement early

- Present messages first: They report their work in reverse order

- Strive for conciseness: They include only the required information

Young engineers (novices) fresh on the job are unable to do these tasks because they have the wrong models from academia—the textbook, the teacher—which influence how they communicate on the job and provide little motivation for their audiences.

He described a straightforward approach for instructors: Create a real-world situation. Have students address students rather than teachers. For example, have them replace the teacher ("You do chapter 1 and explain it to the class," etc.). Constrain students in space and time by limiting document length and speaking time to develop conciseness.

He noted the importance of feedback that encourages learning vs. feedback that justifies a grade. He has to explain to students that when they are on the job, the company cares about the final result; and feedback is to teach and improve their work, not to judge their talent. To get this across in the education process would help undergraduates immensely.

The Kaleidoscope Turns: Shifting Paradigms for International Technical Communication (panel)

By Debbie Davy

Paradigm Shifts in Poland, Bulgaria, and Ukraine

Victoria Mikelonis opened her talk on shifting paradigms with a quotation from Sophocles: "One must learn by doing the thing, for though you think you know it, you have no certainty until you try…."

Instead of simply accepting or rejecting an innovation as a fixed idea, potential adopters on many occasions are active participants in the adoption and diffusion process, struggling to give their own unique meaning. Change agents who introduce new ideas into a social system change that system, and the change agents and innovators need to work together to impact the social system in positive and revitalizing ways. In the process of adopting and adapting new ideas, the innovators reconstruct the social systems and institutions in which they live and work, thereby reconstructing their realities.

For serious and lasting educational reform to take place, faculty and administrators in developing countries have to radically shift their educational paradigms, their traditional notions about student and professor roles, and their delivery methods.

Mikelonis described her efforts to induce Ukrainian faculty to change the way they think about education, to move away from their traditional pedagogical lecture format, to embrace interactive and participatory teaching methods, and to gain experience in business and industry under Ukrainian conditions. Only six institutions were able to make serious attempts at reform through her efforts because of severe economic constraints. New ideas were slow to be accepted as they were not compatible and consistent with existing attitudes and beliefs. Change takes place slowly, and with time and continued funding North American techniques will gain wider acceptance.

Processes of Intercultural Communication as Part of Shifting Cultural Paradigm

"How can we prepare technical communication students better, for not only understanding localization, but also engaging in intercultural communication in the workplace?" asked **Constance Kampf** in her talk on the processes of intercultural communication.

Reflecting on Education

By Michaël Steehouder

This session was a true goldmine for those participants who teach technical communication in academic programs. The common theme of the presentations was program promotion: how to promote a new Ph.D. degree program on text and technology at your university, a course in research methods in your program, and a course in technical communication for students in engineering programs. The presenters disclosed their secrets to an attentive audience.

Paul Dombrowski, associate professor at the University of Central Florida, reported his efforts to establish a Ph.D. degree program in text and technology in the department of English. Although technical communication is fully accepted there, it turned out that such a program was not as obviously desirable as many would expect; Paul had to convince the bureaucracy. Some of his arguments regarded the content of the program: Since we live in a digital age, it is logical that a doctoral program in this field is needed. Other arguments were more political, such as that only interdisciplinary programs were currently being approved. And finally, the proposed program contained some elements that should convince the literature department, such as including courses like history of the book and culture studies in text and technology.

Mary Sue MacNealy discussed the importance and the content of a research methods course in a technical communication program. Mary teaches at the University of Memphis and she has been responsible for this course. She sketched how this course evolved from an elective one with a very narrow scope to a required one where students get acquainted with a variety of research methods. The aim of the course is not so much that students learn how to do research themselves, but that they learn how to read and evaluate empirical research in their professional literature.

One of the important aims of the course is to change the students' attitudes toward empirical research. Mary showed the results of questionnaires she presents to her students before and after each course. The answers show that beforehand, students have only vague ideas about what empirical research is, such as "experimentation" or "something with figures." Afterward, their understanding *and* appreciation of empirical research have changed considerably. "Did I really say that?" one of the students asked himself when confronted with his earlier answer.

Apart from the fact that the research methods course replaced a course in a foreign language on the list of requirements, which was criticized by some of the audience, Mary got much appreciation for her efforts to promote the course in the program. "How can we expect to be taken seriously in the academic world without such a course?" was one of the supporting rhetorical questions.

David Beer addressed an issue that was recognized by many of those present at the session: how to motivate technical students for a course in technical communication. David, who has directed the technical communication program in the department of electrical and computer engineering at the University of Texas for the past 18 years, showed a number of slides with figures and citations that should convince engineering students of the importance of communication for their professional career.

To mention only two: "It is unquestionably true that writing and speaking abilities are essential to the successful engineer. Nearly every engineer who has been unsuccessful in my division had poor communication skills" (Robert W. Lucky, then executive director, AT&T Laboratories); and "Improbable as it seems, many engineers will spend more time in front of an audience than the average student majoring in drama, and generate more literature than the average English major" (*IEEE Potentials*, February 1988, p. 19). Also, the fact that engineers on average spend 20 percent of their time writing reports, letters, and e-mail, and another 12 percent of their time promoting their work, convinces many students.

In the discussion it became clear that David's pep talk for his students was convincing for the present teachers, too. However, as one of the discussants pointed out, making students *aware* of how important communication is, is only the first stage of our mission as teachers. The second stage is even more difficult: making them *like* communication.

The Kaleidoscope Turns

Kampf advocates organizing the complexity of intercultural communication into patterns that help the student identify, learn from, and reflect on intercultural communication. Students learn from the two-way nature of intercultural communication that links cultural theories to the student's personal experiences abroad and to intercultural opportunities in the community. Before embarking on an intercultural communication assignment, students attend a briefing course on what implicit and explicit mores they need to know to blend in. Upon their return, an additional course is needed to acclimatize them back into the North American culture they left behind. Kampf says that in each foray into intercultural communication, something from the host country is left behind and a new perception or way of doing things is absorbed from the destination. In this way our lives are enriched.
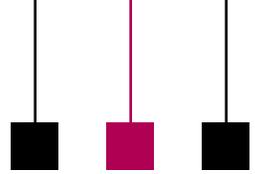
Working Together When You Can't Be Face-to-Face (workshop)

By Debbie Davy

Providing Techniques to Facilitate Good Decisions and Productive Conflicts

How can we best work together when we can't be face-to-face? **Jean Richardson** and **Lisa Burk** addressed this question and offered usable solutions for those of us who communicate from a distance or a remote location.

We communicate through three primary channels:

1. Through verbal channels, in which seven percent of the emotional meaning of a message is communicated
2. Through paralanguage, in which 38 percent of a message is communicated by voice
3. Through nonverbal channels, in which 55 percent of the message comes to us through gestures, posture, facial expressions, etc.

With distance communication, the messages coming to us from these channels are truncated. As individuals we construct our own idiosyncratic realities (or rules). This can cause misunderstandings if these same virtual communication rules and norms are not well understood or shared.

In virtual communication, human contact suffers and there is the potential for "toxic worry"—anxiety that has no basis in reality. Sometimes there is a loss of mental acuity, a decrease in emotional well being, and decreased access to thinking skills important in problem solving.

Yet virtual communication offers many benefits, too, such as decreased travel costs and easier scheduling. The asynchronicity of e-mail lets communication happen without interrupting critical work processes. Low context tasks, such as organizing meetings, can occur without repeated phone calls. Side conversations can be taken offline with less distraction,

and people who write well can often communicate tremendous richness of information in e-mail. People who do not do well face-to-face can be stellar contributors in e-mail, and while conflict can sometimes escalate more easily in e-mail, it can also sometimes be more easily addressed—or avoided—in e-mail.

To prevent communication problems, identify your communication partners' communication norms and, when forming a new team, be conscious about those norms and follow these general rules:

• Clearly identify your topic
• Identify the main point of contact
• List the most important things first
• Decide on optimum contact times and ways of communicating (status meetings, when to communicate, when the team has to be face-to-face, time differences, frequency, e-mail, telephone, etc.)
• Set up group lists

Under the Microscope: Writing Methodologies

By David Farkas

Managing Headings in Print and Online Documents

David Farkas, a professor from the University of Washington, led off this session by revisiting the topic of headings in documents. He claimed that textbooks and handbooks cover only basic techniques for using headings, and he demonstrated less familiar techniques that are often used but which have not previously been articulated. Dave also raised the issue of possible negative consequences on a broad scale stemming from the lack of subordination characteristic of PowerPoint presentations. He made connections between headings and the hierarchical linking structure of Web

sites, and he showed how heading structure can cause problems when content is used in both a print document and a Web site. Attendees seemed to accept his claim that professional writers benefit from knowing various subtle techniques for using headings, and they were certainly struck by one tidbit of information: Microsoft's estimate that 30 million PowerPoint presentations are given each day.

The Six-piece Chinese Puzzle: Inspiration to Structuring Communication

Wing Kin Lee delivered one of the most unusual and intriguing presentations of the conference. Lee, a faculty member in electrical engineering at the University of

Hong Kong, showed the audience several six-piece, three-dimensional, wooden jigsaw puzzles that date back over 1000 years. From the shape of the pieces and from the way in which the puzzle can be solved, Wing Kin brought forth insights about creativity and metaphors that can inspire and guide us toward better writing. Elements of linguistics, systems theory, cognitive psychology, and mysticism were present in his talk. Wing Kin coaches oral presentations in Hong Kong, and indeed he is a dynamic and eloquent presenter. Probably each member of the audience learned different things from him. Without a doubt, Wing Kin gave a presentation that his listeners will long remember.

Does Information Mapping Live Up to the Expectations?

Carel Jansen, a professor at the University of Nijmegen in the Netherlands, reported on a carefully designed empirical study of the effectiveness of the widely used Information Mapping® methodology. Carel tested a written procedure currently in use at a Dutch corporation, a new version of this procedure created by a skillful writer not acquainted with IM, and a version that follows the IM format. Few significant outcomes in regard to performance were found, either with native Dutch speakers or immigrants with a lesser command of the Dutch language.

Many people in the audience were familiar with IM and recognized the importance of Carel's study. They also listened with great attentiveness while Carel pointed out weaknesses in some earlier studies that reported on the effectiveness of documents produced using Information Mapping. One important aspect of IM, however, is that it seems to enable less skilled writers to write better documents than they would otherwise. Carel acknowledged that his study does not bear upon this question.

Technical Communication Perspectives on Information and Communication Technology Projects (panel)

By Debbie Davy

International ICT Implementation Projects: Policy and Cultural Considerations

Beth Kolko of the University of Washington described some of the challenges in implementing ICT (information communication technology) in Central Asia. The digital divide between North America and Central Asia is due in part to economics and the availability of technology and connectivity, which is sometimes nonexistent. Social and political issues (official vs. unofficial policies) affect usage patterns, adoption and penetration rate, and views on technology. In Central Asia, ad hoc neighborhood groups called *mahalas* have been the people's traditional sources of information. Introducing information communication technology, such as the Internet, is both welcomed and resisted by the local governments and the people they serve.

Information and Communication Technology in Government Organizations: Internal vs. External Audiences

Mary Ann Krug discussed her experience with the Washington State Department of Transportation Web page. Individual reporting sites resisted central organization control, causing a disparity in reporting practices. Krug suggested implementation of an information exchange system that would help pool resources, resolve disputes, and address challenges in a cohesive fashion. Without a centralized control system, it is difficult to establish an organizational history and learn from past experiences, which ultimately impairs the ability of the organization to respond.

Organizational Barriers to Central Initiatives

Mark Haselkorn of the University of Washington discussed some of the organizational barriers to central initiatives and control in communication projects. For example, without central control there is unclear ownership and responsibility for information, technology, and policies. The best systems address the audience, purpose, budget, and communication culture. They offer management control over content and design while ensuring local diversity and autonomy. To remove perceived barriers to central initiatives, Haselkorn recommends central guidance but local execution and the continual empowerment of cross-functional, cross-hierarchical entities to balance a dynamic situation.

The Same Only Different: Customizing Content

By Stephanie Rosenbaum

Why, When, and How Do Users Customize Web Portals?

Amy Aragones and **William Hart-Davidson** have designed a usability scorecard for customizable Web content design. (By customization, they mean selecting options, providing input, and choosing specific content—not personalization.) Using techniques from quality function deployment (QFD), they created a series of matrices that map customer wants and needs against portal design objectives; these QFD matrices help them analyze data from their research with a large corporate portal site. They are investigating how many users customize content, and why; how people organize customized content; how often users revise their customizations; and what usability issues arise about allowing users to customize content. In the corporate

portal they studied, one interesting datum is that about the same number of users (one-third of those who customize) change their customization monthly as never change it—a usability challenge for designers trying to meet the needs of both groups.

Mirror Method: Help First, Book Last

Marshall Bloom uses his experience as manager of technical documentation at Mercator Software to address the age-old challenges of tight deadlines and incomplete information with an innovative process that is best suited to complex products. He suggests beginning documentation libraries with their modular help systems and only later producing the user's guide or other linear book. This way, writers can create individual help topics that capture the nuggets of information available early in the development process. Reviewers are more willing to read nuggetized help topics than lengthy tomes, which speeds the review process. When writers work in this modular fashion, writing and reviewing can take place simultaneously (and quickly). Although this approach at first seemed to be an argument against information architecture or planning, that's not really the case. Rather, decisions about the table of contents for the help system (or the organizational structure of the linear book) need not all be made before any nuggets are written, and can happen in parallel with the writing and reviewing processes.

E-learning, Single Sourcing, and SCORM

Ann Rockley described a new model for the delivery of electronic content; it's especially valuable when used with a single-sourcing program for information reuse. She first described the value of single sourcing to create adaptive learning products, where learners control their learning environment or the learning materials adapt to learners' needs. She then described SCORM, the shareable content object reference model from the Advanced Distributed Learning (ADL) Initiative, a collaborative effort between government, industry, and academia to support interoperability of learning tools and course content. SCORM is an XML-based delivery model; it's a distribution method rather than a design guideline. SCORM delivers content through a Web browser, organized as a collection of shareable content objects described by meta data; for more information see the ADL Web site at *http://www.adlnet.org*.

Reflecting on Enterprise Content Management

By Stephanie Rosenbaum

Enterprise Content Management

Heather McNay described her experience managing the corporate intranet at Siemens Energy & Automation (a part of Siemens worldwide, this 7000-page site is used by 10 000 employees, of which about 200 are content creators). She implemented a distributed authorship program, where the original content creators place the material on the Web and keep it updated. For such a site to be useful and usable, it must begin with an information model that categorizes all the information resources. Creating the information model requires analysis, careful planning, and feedback from the user community. McNay then described how she created page templates for content owners, put approval and publishing processes in place, and manages the site. She concluded, "The return on investment for any Web site is based on the site's content and organization. Efforts toward fresh content in an organized structure will pay off much more than color schemes, graphics, gimmicks, or fancy applications."

Enterprise Content Management Using a Unified Content Strategy

Ann Rockley delivered three related presentations at IPCC 2002; in this session she talked about expanding single sourcing from technical publications to enterprise content management. Companies have many content creators developing similar or related content in isolation from one another, a situation Rockley's consulting firm labels The Content Silo Trap™. When content is created by many people and delivered in many ways, the cost to create and deliver it increases by the number of times the content is recreated or massaged. If content is translated, each version must be translated. To identify the large amounts of duplicated content—and expensive wasted time— Rockley conducts substantive audits of enterprise content. The ROI of a unified content strategy is especially large when content is translated; enterprise content management can often pay for itself in a year. Rockley described the components of a unified content strategy: a content management system, reusable content, and unified processes. She then answered many audience questions about project size, project length, and available software.

Avoiding Technological Assimilation: Defining Content Management

Ben MacKay, a graduate student in the technical communication department of the University of Washington, used a *Star Trek* metaphor in his presentation. He described the Borg Paradox, named from the *Star Trek* villains who proclaim

"Resistance is futile" because they take over the bodies of their enemies. If you combine a Borg and a human, the result is a Borg. In technological assimilation, when you combine a clock and a computer, the result behaves like a computer rather than the desired better clock.

Similarly, in attempting to manage content, we've gone from data management to information management to knowledge management, creating complex software gadgetry without achieving our goals. MacKay quoted Alan Cooper, Eric Berkman, and others about the results

and high costs of technological assimilation. He then discussed how technology-independent definitions of data, information, knowledge, and content are possible, and that content management gives us another chance to show that "Resistance is *not* futile."

Marking the Edge of the Road: Communication Ethics and Issues

By Debbie Davy

Teaching Enron: Using Current Case Studies to Teach Communication Ethics

Teaching through case studies is an efficient way of transferring knowledge. **Richard House, Anneliese Watt**, and **Julia Williams** of the Rose-Hulman Institute of Technology used the recent Enron scandal to teach communication ethics. Because of their age, the students would not necessarily have a firsthand recollection of the Challenger disaster, but they would be aware of the Enron collapse.

House, Watt, and Williams felt that to present an effective case study, primary

texts need to be available as well as current information that can support rhetorical analysis. And it is helpful if the students perceive the event as current. They explained the ramifications of the Sherron Watkins whistle-blowing letter in Enron's collapse.

Crisis Communication Strategies: Some Lessons from September 11, 2001

Judith Strother of the Florida Institute of Technology discussed what makes good crisis communication. She discussed the press releases from American Airlines and United Airlines on September 11 to analyze how well each airline communi-

cated during the crisis. United Airlines issued more frequent and better worded press releases.

In an extraordinary situation, communication needs to be accurate, limit the duration of the crisis, show compassion, demonstrate corporate responsibility, address victim compensation, and prevent further occurrences where possible. In an event such as September 11, these standard crisis response strategies needed to be modified.

Strother argued that communication goals must provide for a constant flow of information in an honest, responsible manner. As a general rule, never say "no comment," and appear to put the public first.

Shisha and Isinglass: Communication Beyond English

By Marj Davis

Constructing a Corpus of Fundamental Engineering English [for Nonnative Speakers]

This session delivered specific and significant information regarding the demands of working with nonnative speakers of English. **Thomas Orr** and **Akihito Takahashi** described a significant research project to identify about 1500 most important English words for Japanese engineers to know. The project involves a search of key professional journals for the core vocabulary of each discipline, then adding the fundamental

English words relating to general and professional English. The project will result in both a textbook and a test, similar to the TOEFL®. The significance of such a project is that English-speaking engineering companies will have a standard of professional language skills to help assure that Japanese engineers can succeed. Additionally, I can foresee that engineering graduate schools could use such a professional examination to screen applicants; having this professional English score in addition to the TOEFL score would enable admissions commit-

tees to make an informed decision about the probable success of applicants. For technical communicators, this project demonstrates linguistic research strategies involved in reaching a corpus of critical words for cross-cultural work projects.

Balancing Clarity and Politeness in Editing Sessions with Nonnative Speakers

Jo Mackiewicz and **Kathryn Riley** demonstrated how applying pragmatics can help overcome editors' problems of offending writers for whom English is
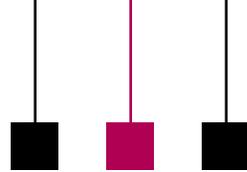
not the native language. Pragmatics includes the contextual and social effects of language, such as the differences in rank and power among communicators. The researchers identified a number of strategies to avoid face-threatening editorial comments. In general, the strategies include phrasing changes as suggestions, offering benefits for changes, or targeting remarks to the effects on the reader rather than criticism of the author. Since about 30 percent of master's degree students in the U.S. are nonnative English speakers, this advice is important to all who teach or edit papers.

Reflections on Research and Pedagogy in Distance Education Courses (panel)

By Roger Grice

Three members of Rensselaer Polytechnic Institute's faculty spoke on their experiences in delivering technical communication courses and human-computer interaction courses through RPI's professional and distance education program. They engaged the audience in a lively discussion of the possibilities and challenges of delivering education to a student group consisting of undergraduate and graduate students on campus and working professionals connected to the classroom electronically.

Reflections on the Role of Pedagogy in Technological Education

Roger Grice described the structure of Rensselaer's distance-education delivery system, which permits students on campus to participate with working profes-sionals connected to the classroom by videoconferencing, satellite broadcast, video streaming, telephone, in-class chat line, and electronic bulletin boards. The subject matter of many of the courses deals with usability of information and interfaces, and the complex and varied modes of connection present challenges in information dissemination and retrieval and in communicating through a mixture of connection modes and interfaces while doing so. The discussion also touched on the changing natures of communication, engineering, and science and their inter-relationships.

Leveraging Theory & Research in the Design of Communication Software

Bill Hart-Davidson described an example of making use of the synergy between activity theory and emerging methods for modeling information objects and relationships through XML. The example illustrated how analysis of a process for writing yielded much information about the types of information objects used and produced, the number of times they were distributed and received, and the activities and checkpoints that actually caused something to happen. The study highlighted the importance of teaching technical communication as a highly mediated, distributed activity and indicated that technical communicators play a far more important role in decision making than is generally recognized—even by the technical communicators themselves.

Communication Within a Virtual Community

Robert Krull identified many of the problems that can occur when trying to deliver effective learning through a technologically diverse and complex system, including a wide range of traps that plague students, instructors, and program administrators. He pointed out a number of ways to avoid some problems and solve others, but also that the complexity of the delivery system and the wide range of student backgrounds and connection capabilities imply that there will never be easy solutions. Facilities designed to foster communication among members of the class can often be bewildering to those who do not fully understand them or who are beset with system problems and intermittent failures.

Web-based Empirical Studies of Online Information: Process and Product (panel)

By Luke Maki, Laura Schultz, and Jan Spyridakis

Most of us have made qualitative assessments of Web sites as we browse. There are sites that are easy to navigate and comprehend, and there are those that lead to frustration, perhaps to the point of terminating one's search. This session explored how online information can be empirically studied for reader comprehension and usability. The process by which these studies can be conducted was described and the results of two online studies were presented. The session was moderated by Dr. Jan Spyridakis of the University of Washington department of technical communication, and three of her master's degree students presented parts of their thesis work.

The Effect of Content, Organization, and Navigation Features of Web-based Medical Information

Kris Freeman provided an overview of the process of online studies, including

Web-based Empirical Studies

their advantages and disadvantages, their validity as compared to traditional studies, the manner in which participants can be recruited and retained, and recommended practices to make the study successful. While some research has shown that online studies provide congruent results with more conventional studies, there are some disadvantages that must be mitigated. Ms. Freeman's examination of online studies suggests that they can be successful if special efforts are made to enlist under-represented groups, incentives are offered for participation, and the user experience is kept short and simple.

Laura Schultz presented some preliminary results of her research on the effect of heading frequency in online information on reader comprehension and emotional state. With 70 percent of people accessing online medical information actually making treatment decisions based on that information, information must be presented in a comprehensible manner. Using Web pages with arthritis information, Ms. Schultz varied the number of headings (a form of text signal) appearing within the information. She collected data regarding emotional levels and comprehension. Her hypothesis that more headings would provide better comprehension was initially refuted. Because headings are well studied in print research and are shown to help comprehension in many ways, additional research is being performed. The hypothesis that emotional states would change had mixed results: Participants felt significantly less anxious or on edge and happier after reading the arthritis materials. These results supported research that unmediated communication (i.e., Web pages without face-to-face contact) can affect the emotions of patients.

Kate Mobrand presented the preliminary results of her study of user performance with enhanced navigational cues.

Four hypotheses regarding comprehension, user perceptions, Web usage patterns, and prior knowledge were tested. Participants were surveyed before and after reading and navigating Web pages. One interesting result was that the wording of navigational links can make a difference: Participants who read Web pages with the least informative links had the poorest comprehension. The unexpected lack of higher comprehension for readers who encountered the most explicit links may have been due to the violation of reader expectations for traditional link wording such as *next* and *previous*.

However, as expected, readers who encountered the most explicit navigational links did follow the most links; Kate conjectured that these readers may have been more secure about their current location and thus more willing to follow links to other locations.

These studies show that continuing research can have an impact on both the process by which meaningful online studies can be conducted and on principles for sound Web design, principles that when implemented should ultimately improve the user's Web experience.

## Developing Programs in Scientific and Technical Communication (panel)

By Roger Grice

For this session, four members of academe discussed the past, present, and future of their academic programs. The session was suggested by Mary Lay, this year's winner of the Ronald S. Blicq Award. The panel members were:

- **Mary Lay**, professor of rhetoric in the scientific and technical communication program and faculty fellow in the law school at the University of Minnesota Twin Cities

- **Marjorie Davis**, professor and chair of technical communication in the school of engineering at Mercer University

- **Mark Haselkorn**, professor and founding chair of the department of technical communication in the college of engineering at the University of Washington

- **Roger Grice**, clinical associate professor of technical communication and human-computer interaction and member of the faculty of information technology at Rensselaer Polytechnic Institute

While the schools and programs represented varied widely, common themes ran throughout the session. University of Minnesota and Rensselaer have older, more established programs, whereas Washington's program was established by a quirk in the rule book about who was entitled to have an office window, and Mercer's program came into being in response to a "What would you do if…" question.

Participants spoke of program growth over the years and the efforts that they and their colleagues had made, and continue to make, to keep up with changing times and growth in the field of scientific and technical communication. And while there was optimism about the future, all spoke of working to survive during the current tight economy, trying to accomplish more while being given less. All agreed that it would be interesting to gather again at a future conference to discuss how their programs continue to grow and evolve.
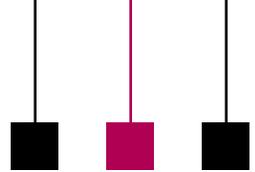
Keynote Address

By David Beer

IPCC 2002 enjoyed a lively and entertaining keynote address on Wednesday afternoon, 18 September. Our speaker, **Thom Haller**, talked about his Adventures of an Information Architect, describing autobiographically how his own career has moved from experience through change to possibility. Confessing that he is a "technical blobhead," Thom told us

Thom Haller

how his professional aim has always been to find information, appreciate it, and use it.

A teacher, speaker, writer, and user-advocate, Thom founded Info.Design in 1996. Info.Design is a consultancy and think tank that teaches strategies for presenting information so it is easily understood. The organization works with a broad spectrum of clients, including World Bank, AARP, the Smithsonian Institution, the U.S. House of Representatives, and the University of Maryland. As Thom puts it, "When we consult with organizations, we help them learn the fundamentals of information structure and user experience. That way, they can continue to make information accessible to their end users on future projects."

Thom gave a fascinating description of his West Virginia past and his beginnings in technical communication. When he moved to Washington, D.C., he became a "data stylist" as he thought, but found he was actually an information architect looking at the underlying structures of information. In fact, his career has been marked by a constant change in the titles he has been given, but he has always seen himself as an information architect. He has been particularly interested in what restraints—internal and external—we meet in structuring information, and he continued this interest when he launched into Web development and documentation.

Thom sees the purpose of documentation as being something that makes life easier for others. What really shows our value as communicators is what we provide our customers. Moreover, user-focused structures can save millions of dollars a year. More such wisdom can be found, presented in the context of Thom's own life, in the copy of his keynote address on the Web at *http://www.infodn.com/ download*. Also, he was profiled by Charlotte Brammer in the *IEEE Transactions on Professional Communication*, vol. 42, no. 3, September 1999, pp. 181-184.

IEEE

PCS

IEEE PROFESSIONAL COMMUNICATION SOCIETY

Newsletter