

## IPCC 91: An Advance Report Card

by D. L. Plung, General Chairman

As IPCC nears, I am sincerely confident that this will be one of the most successful professional communication conferences to date. I would like to share briefly why I can say this with certainty.

Approximately one year ago the IPCC 91 Steering Committee met for the first time. The team—an exciting mixture of experienced PCS members and industry professionals new to the IEEE—discussed numerous ideas and strategies, all of which were translated into two key conference initiatives: 1) To provide a program that reflects the depth and dimension of our discipline, both in scope of topic and diversity of presenters; and 2) To make the IPCC 91 experience a memorable one, an event whose impact would extend beyond our 72 hours in Florida. Each Steering Committee member, each subcommittee had the mandate to promote, support, and amplify these two initiatives. While I recognize October 30-November 1 will yield the final assessment of our efforts and accomplishments, I would like to provide my own pre-conference report card.

### Initiative 1: Design and Development of a Program that Reflects the Depth and Dimension of our Discipline.

One attribute was to extend PCS's growing international role. In support of this goal, and largely through the efforts of Rudy Joenk, we have secured two dignitaries from the USSR to discuss professional communications, information resources, and electronic information in the USSR. Additionally, a workshop on writing in English for an international audience (previewed by the PCS AdCom during a recent

meeting held at Los Alamos National Labs) has been added to the program.

To reflect PCS's expanding influence here at home, the Steering Committee initiated an aggressive call for papers that included advertisements in the newsletters of IEEE and other communication societies, posters issued to more than 100 universities with technical communication programs, fliers mailed to more than 2,000 professional communicators,

---

*While the conference record reflects the technical dimension of the conference, it cannot capture the dynamics.*

---

and press releases sent to more than 40 technical journals. The success of this effort can be accurately judged by looking at the IPCC 91 program.

IPCC will have 26 concurrent sessions, comprising approximately 90 presentations, and several workshops. Essentially all regions of America and Canada are represented. Presenters from many of our

*continued on page 3*

## INSIDE

From the Editor .....	2
Marketing Help Needed .....	3
The Late Lacy R. Martin .....	4
President's Message .....	5
IPCC 91 — Program/Registration ..	6-7
Notice for Patent Attorneys .....	8
The Delphi Technique .....	8
Tools of the Trade .....	10
IEEE Book Sale! .....	11
The Communicator's Creed .....	12

# FROM THE EDITOR

by Bruce Brocka

## Hello!

I welcome the opportunity to be your *PCS Newsletter* editor. Your suggestions on what to include, or not include will be invaluable, and I invite your opinion. The work promises to be challenging, as the scope of the Professional Communications Society is probably the broadest of any society within the IEEE. After all, communication can be anything written or verbal, whether it is a lab report, briefing, or performance appraisal. Although the settings or subjects of our communication are dramatically different, quite often the techniques and principles involved are not. I expect to hear from you on tools, techniques and tips that you have found to be effective. If writing an article takes too much time, dash off a letter to the editor.

## Adventures in the Affective Domain

As engineers, our education in the communication area has probably been slighted for more technical subjects. Indeed, I've heard many an engineer bemoan the need to write reports, or present briefings—heaven forbid they should have to write or talk on something they don't consider directly related to their engineering tasks. They fail to see communication as an opportunity to assemble our thoughts, and to provide a foundation for future work. Besides, it's hard work to organize our thoughts, and to carefully prepare references and figures. But once done, the result is often a work of lasting value. Those of us in PCS need to get the word out that this is the society to join in order to enhance those skills. Every member of the IEEE who has to write or speak on a regular basis should join us.

If your colleague still can't see the benefit of joining PCS to further their knowledge of the mechanics of communication, then have them consider it an adventure into the other (possibly lesser used) side of the brain. The right hemisphere of the brain tends to control such affective domain tasks as communication. The left hemisphere tends to control cognitive activities such as mathematics. Invite them to explore skills they may not know they have.

As a graduate student in physics I was terrified to teach (my worst fear was that someone would ask me a question to which I didn't know the answer). No one gave me any training whatsoever. But I found I enjoyed it, and realized that it required skills as complex and as difficult to master as mathematics (harder, in some respects). Later, as I became an instructor of adults, and had more experience and training in speaking, I was able to augment my skills and enjoy talking to groups, despite my innate shyness.

My adventures into the affective domain continue with the editorship of this newsletter, and I sincerely invite all to share their exploits into technical communication by asking a colleague to join the society or by submitting an article or review to either the *PCS Newsletter* or the *Transactions*.

## Communication as a Strategic Business Asset

While many of the articles in the *Newsletter* and *Transactions* emphasize the mechanics of communication, I would also like to place communications in context within the organization, whether it be a corporation, agency or university. Communication to a business is more than public relations or how to write performance appraisals or lab reports. It is a strategic asset. Without a viable internal communication structure, things slip

through the cracks. Quality slides downhill, with no one noticing. The organization that is unable to counteract negative publicity may be doomed. Thus I would like to see articles on tools that can be used to improve communications in this strategic sense. Over the next few newsletters, I'll be presenting the techniques of brainstorming, nominal group technique, quality circles, Delphi technique (see page 8 of this issue), and others. I encourage your submissions in this area as well. ◀

## IEEE PROFESSIONAL COMMUNICATION SOCIETY

### Officers

Rudy Joenk, **President**  
Richie Robinson, **Vice-president**  
Bill Giesecke, **Secretary**  
William Kehoe, **Treasurer**

### Staff

Bruce Brocka, **Editor**

*IEEE Professional Communication Society Newsletter* is published bimonthly by the Professional Communication Society of the Institute of Electrical and Electronics Engineers, Inc., 345 E. 47th St., New York, NY 10017. One dollar per member per year (including in Society fee) for each member of the Professional Communication Society. Printed in U.S.A. Second-class postage paid at New York, NY, and at additional mailing offices. **Postmaster:** Send address changes to IEEE Professional Communication Society Newsletter, IEEE, 445 Hoes Lane, Piscataway, NJ 08854.

### Editorial correspondence:

1005 Mississippi Avenue  
Davenport, IA 52803. Articles, letters, and reviews from readers are welcome.

# Marketing Help Needed

by Rudy Joenk

PCS has several communication "products" that might well be best sellers if we were effective in letting the appropriate audiences know they exist. For example, there are four CommuGuide booklets, with two more to be published later this year; five IEEE Press books, with two more to be published this year, and one or two next year; and there is a communication workshop for presentation in industrial settings.

The IEEE Press books get exposure occasionally in IEEE literature, and the CommuGuide were just added to the spring catalog of the AAES (American Association of Engineering Societies), but there is no focused or targeted marketing effort for our publications alone.

We need marketing help to make the right segments of the world audience aware of these and other PCS products. We need ideas and copy that might come naturally to someone who "thinks marketing." Please phone me or send me a note if you can help or want more information. Phone: (914) 742-5665; fax: (914) 742-6034; Internet: r.joenk@ieee.org; mail: IBM Corporation, 500 Columbus Ave., Thornwood, NY 10594. ◀

## IPCC 91: Report Card

(continued from page 1)

leading corporations (including IBM, GTE, Hewlett-Packard, Texas Instrument, Westinghouse, Micro-soft, Aldus, Bell Northern, and Digital Equipment) will be joined by representatives of approximately 20 different universities, as well as presenters from major government agencies (including the U.S. Army and the Department of Energy).

Overall, as compared with our successful London conference, this represents increases in university representation by approximately 50%, a more than 100% increase in participation by government agencies and national labs, and approximately a 350% increase in collaborative (joint industry/academic) papers.

In fact, the diversity and volume of papers submitted created a challenge for the program and publication committees who were responsible for paper evaluation and selection. (The committee received approximately 30-40% more papers than could be fitted in the program.) To afford a cohesive, structured program, papers were selected on the basis of their ability to support the practical and theoretical elements of the program theme, potential interest to conference attendees, and contribution of our discipline. The resulting engineering program therefore affords real insights into the "engineered communication," with particular strengths in such areas as engineering technology, university/industry interfaces, and international communications.

## Initiative 2: Ensure the IPCC Experience is Memorable and Lasting

Two major activities have been developed to support the initiative for a lasting product. The first is to enhance the quality of the conference record. The second is to provide a more novel mini-history of the conference. The major innovation in our written history is that, for the first time, the conference record is being published electronically. Presenters provided ASCII files, consistent with style requirements developed by the Publications Committee. Once received, each paper was reviewed by an editor to ensure consistency in style and format, and a précis prepared to introduce each of the technical sessions. A single electronic copy of the manuscript was then transmitted to the printer.

Accordingly, just as we used the tenets of refereed journals to develop the program, so we are using contemporary book publishing methods for our conference record. Owing to the program design effort and the publishing strategies, the IPCC 91 conference record will be a polished, professional publication.

Yet, while the conference record reflects the technical dimension of the conference, it cannot capture the dynamics. As all who have attended IPCCs before know, much of the PCS's effectiveness is communicated through the immediate, one-on-one interactions among our members. Accordingly, the second activity involves the videotaping of conference elements. Several Wednesday sessions, including the keynote speech, will be videotaped by a professional video operation. A marathon editing session—marshalled by Ron Blicq—will occur at the film's Orlando headquarters on Thursday. On Friday morning, videos (approximately 30 minutes long) will be available for purchase. (Preorder forms will be inserted in the attendee registration packages.)

Cumulatively, the video, the conference record, and other practical reminders (such as the IPCC 91 tote bags that will be issued to all attendees) will afford a substantive, lasting memory of the conference. Throw in the civilities of a pleasant reception on Tuesday evening, the Florida Luau on Thursday, the ongoing networking opportunities, and how can one ever forget such an event?

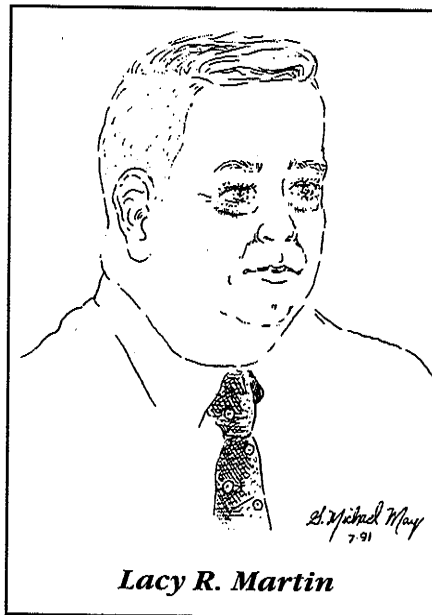
Well, as prosaic as I am known to be, I expect I have more than made the point that IPCC 91 will be a conference well worth attending (not to mention a relatively inexpensive one too!) I hope each PCS member will give thought to spending time with us in Orlando. I look forward to seeing you there! ◀

## Lacy R. Martin

### 1932-1991

Lacy Martin passed away on March 12, 1991 from a heart attack. He was for many years an indefatigable supporter of the Professional Communications Society. He was a member of the IEEE since 1967, of the IEEE/PCS since 1972, and was on the PCS AdCom since 1978. In 1987 he won the Alfred N. Goldsmith Award, given in recognition of service within the IEEE Professional Communication Society to improve the quality of engineering communication. He was also a senior member of the Society for Technical Communication. He was elected a fellow of the Institute for the Advancement of Engineering in 1987.

Lacy graduated from the University of Mississippi with a B.S. in journalism and minors in marketing and advertising. He joined IBM in Kingston, NY in 1956 as a technical writer and editor. He subsequently became Manager of Proposals in the Metals Industry Group of Pullman Swindell in Pittsburgh. He also worked for



**Lacy R. Martin**

Dames & Moore, Ralph M. Parsons Company, Litton Systems, and was a partner in DCI Consultants. Also Lacy later moved to Los Angeles area, where he was the Manager for Documentation for Mitsubishi Electronics America, Inc.

Lacy was an enthusiastic private pilot, sailor, and deep sea angler. A tribute from his friend, Lois K. May, follows.

Death has removed from our midst our friend and colleague, Lacy R. Martin, who for many years devoted himself unselfishly to the interests of the IEEE Professional Communication Society. His sudden passing on March 12, 1991 was a great blow to those who knew him.

It is difficult indeed to find words to express regret at the death of this extraordinary southern gentleman. The character of the life Lacy lived might be summed up in these words: he was sincere, he was earnest, he was loyal, he was industrious.

I had the privilege of knowing Lacy since the mid-1960s, when we worked together on various writing projects at IBM, Huntsville, Alabama. Since then, our paths crossed frequently, as Lacy never neglected a close friendship. No one, whose good fortune it was to meet him, is likely to forget his genial personality, generous instincts, and the warmth and charm of his demeanor.

*Lois K. May, Baltimore, Maryland* ◀

## ACM's Special Interest Group in Documentation Conference

AMC SIGDOC will hold its ninth annual conference in Chicago, IL from October 10-12 at the Midland Hotel. Keynote speakers will include William Horton, author of *Designing and Writing Online Documentation* and Dwight Stevenson, co-author of *Designing Technical Reports*.

Program sessions explore a variety of topics, such as:

- Online Usability Testing: Methods and Results,
- Hypertext Help for Complex Technologies,
- Practical Quality Measurement,
- Writing for Users' Workplace Needs,
- Influences of Technologies on Text Design—Past and Present, and
- Project Management and the Role of Information Developers.

Two pre-conference workshops will offer participants background and experience in new approaches to documentation development and in usability testing.

For more information and registration materials contact:

Dr. Barbara Mirel, Program in Technical and Professional Communication  
Humanities Department  
Illinois Institute of Technologies  
Chicago, Illinois 60616  
(312) 567-3465.

## PRESIDENT'S MESSAGE



by Rudy Joenk

### Sad News

Many of us "old timers" were saddened recently to learn of the unexpected death in March of AdCom member Lacy R. Martin. Lacy had been a member of PCS for almost 20 years and was on the AdCom much of that time. We will miss his mediating nature, his convivial disposition, his talent, and his dedication. A recollection from Lois May, former PCS president, appears on page 4 of this issue.

### International Activities

October this year is international month for PCS as September was last year. First there is the IEEE TAB (Technical Activities Board) symposium in Mexico City on October 3. In addition to the technical topics there will be a workshop on Chapters where we expect to have our first personal interaction with the chairman of our new Mexico City/Morales Chapter, Henry Anli Chu Pulido. Vice president Richard Robinson will represent us there.

Then there is the colloquium on new information technology in Moscow, October 8-10. This colloquium was co-convened (a word carefully chosen to preserve the IEEE's fiscal integrity) by the A.S. Popov Society of the U.S.S.R. (roughly the Soviet analogy of the IEEE); the International Centre for Scientific and Technical Information (ICSTI), where the event will take place; and PCS.

Eleven people are in our delegation, nine of whom are presenting, including one from Turkey and one from England. There will be 40 or so others from the Soviet Union and elsewhere.

Finally, there is our own IPCC 91 in Orlando, October 30 to November 1. Even though it's in the U.S., we will have two invited guests from Moscow: Dr. Henrich Lantsberg, chairman of the Professional Communication Group of the Popov Society and head of the Science Information Department of the Institute of Radio Engineering and Electronics (and our host in Moscow), and Dr. Youri M. Gornostaev, head of the Computer Department of ICSTI.

Dr. Lantsberg will present the keynote address at lunch on Wednesday and both will participate in a "Russian Perspectives" session that afternoon. Both before and after IPCC 91, vice president Robinson and others will take our guests on visits to the Kennedy Space Center, Sea World, AT&T, IBM, RPI, and other notable locations.

### Looking for Volunteers

We're always looking for Society members who want to be active members. (1) We're enlarged the AdCom (see the July *Newsletter*) and are seeking additional candidates for the 1992-94 term, (2) we need marketing expertise for our independent publications, and (3) we need a patent attorney to guest-edit a book on patents; see the other article in this issue for details about (2) and (3). ◀

## Why Computers Glare at You

The solution to computer-screen glare lies in full-spectrum polarized light, which also can cut electric bills up to 80 percent, according to engineer Daniel Karpen.

Conventional fluorescent lighting is "an economic and ergonomic

disaster," he says. Full-spectrum light is like sunlight, with increased clarity, more natural colors and reduced visual fatigue. It can be provided indoors by specially designed fluorescent lamps with polarizing lenses that eliminate horizontal rays that bounce off VDT screens, causing glare.

Full-spectrum light costs more to install, but you can work with less wattage, so there is a payback over time: four years for a 400,000-square-foot building, Karpen says.

His ideas currently are being tested at Apple Computer buildings in California and in some New York classrooms and public buildings.

—*Wall Street Journal*. ◀

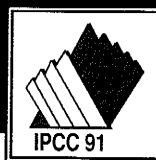
## How to Avoid Losing Files

Many people spend 20 percent of their time looking for information that has been misplaced. Management experts estimate the cost of a single misfiling at \$61 to \$73.

To help avoid this problem:

- Keep your guide headings simple. Complex headings tend to confuse people who are doing the filing.
- Type labels clearly. Illegible headings cause problems. Use at least five but not more than 15 guide headings per drawer.
- Leave three to four inches of extra space per drawer.
- Don't overload individual file folders. Too many papers will sometime cover the guide headings.
- Use cross-references frequently. Use color stock showing the subject of the document and where it is located in the files.
- Write the correct file heading in the upper right-hand corner of each document.

—*Communications Briefings*. ◀

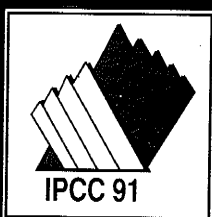


# THE ENGINEERED COMMUNICATION: DESIGNS FOR CONTINUED IMPROVEMENT

## IPCC 91 - Preliminary Program

*An International Professional Communication Conference Sponsored by the IEEE Professional Communication Society  
Sheraton World Resort - Orlando, Florida*

Wednesday, October 30	Thursday, October 31	Friday, November 1
<b>8:00 - 8:30</b> Plenary Session <b>8:40 - 10:05</b> 1. Research on Communications and Miscommunications 2. Expanding Technologies for Technical Communicators 3. Communications as Strategy, Tool, Process, and Product <b>10:20 - 11:50</b> 1. Current Trends and Issues in Useability Testing 2. Curriculum Development for Technical Communication 3. Writing in English for International Audiences <b>12:00 - 2:00</b> Keynote Luncheon <b>2:15 - 3:45</b> 1. Russian Perspectives—A View from Here and There 2. Improving Communications in the Engineering Design Process 3. Evolutions in Computer Technologies <b>4:00 - 5:30</b> 1. Engineered Approaches to Engineering Manuals, Reports, and Proposals 2. Developing Standards—A Dep't of Energy Case Study	<b>8:00 - 9:45</b> 1. New Perspectives on the Impact and Value of Visual Aids 2. Challenges of Online Systems Design, Use, & Testing 3. Directions in Technical Communications Research <b>10:00 - 11:45</b> 1. Tools of the Technical Communicator's Environment 2. Training Programs for Improved Communications 3. The Expanding Environment of Technical Communication <b>12:00 - 1:15</b> Lunch (unhosted) <b>1:30 - 3:15</b> 1. Designing Improved Teamwork Systems 2. Methods for Improved Organizational Communications 3. Perspectives on the Development of Engineering Procedures <b>3:30 - 4:15</b> IPCC 92 Preview <b>4:30 - 6:30</b> Exhibits Forum <b>6:30 - 9:00</b> Florida Breeze Luau	<b>8:00 - 9:15</b> 1. The Engineered Communication: Designs for Continued Improvement 2. University/Industry Cooperation in Research & Teaching 3. The International Reach of Technical Communication <b>9:30 - 11:00</b> 1. Engineering Documents with Automated Processors 2. From Process to Product: Designs for Users <b>11:15 - 12:15</b> The First "Last Lecture" <b>12:30 - 2:00</b> Lunch



**OCT. 30  
THROUGH  
NOV. 1  
1991**

## IPCC REGISTRATION

CLIP and MAIL to: William Kehoe, The Johns Hopkins Univ., Applied Physics Laboratory, Johns Hopkins Rd., Laurel, MD 20723

Fees include conference attendance, keynote luncheon, banquet, Friday luncheon, daily continental breakfast, and a copy of the conference record.

Please make checks payable to: IPCC 91

### Conference Registration

Check One: \_\_\_\_\_ IEEE/PCS member (\$225)  
 \_\_\_\_\_ Membership number \_\_\_\_\_  
 \_\_\_\_\_ Non-member (\$275)  
 \_\_\_\_\_ Non-member presenter (\$225\*)  
 \_\_\_\_\_ Student/retiree (\$112.50)

*\*Subject to acceptance of paper for conference.*

### Extra Meal Tickets/Conference Records

\_\_\_\_\_ Keynote luncheon (\$17.50 each)  
 \_\_\_\_\_ Friday luncheon (\$17.50 each)  
 \_\_\_\_\_ Florida Luau (\$42.50 each)  
 \_\_\_\_\_ Conference Record (\$20)

Name \_\_\_\_\_ First name as it should appear on conference badge \_\_\_\_\_  
 Title \_\_\_\_\_ Company \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Telephone (W) \_\_\_\_\_ (H) \_\_\_\_\_ (Fax) \_\_\_\_\_

Register early to ensure your place at the conference!



Sponsored by the IEEE  
Professional Communication Society

## THE THEME

Engineering, as a discipline, is the subject matter we have traditionally dealt with in the IEEE Professional Communication Society. Engineering can be viewed more broadly as process orientation—the methodology by which technical reporting becomes effective technical communication.

## THE HOTEL

*Bring the family to spend  
next Halloween in Orlando!*

The **Sheraton World Resort**—within walking distance of Sea World—is in the center of Florida's famous attractions. And Florida's October weather is perfect for enjoying the relaxing atmosphere of the resort's 28 acres of tropical retreat.

The **Sheraton World Resort** has excellent sports and recreational facilities: three heated pools, miniature golf course, and fitness center. The Orlando area offers fabulous choices! Disney World, Sea World, Epcot Center, MGM, Kennedy Space Center . . .

*The International Professional Communications Conference is sponsored by the IEEE/Professional Communication Society which is not affiliated with Disney World or Sea World.*

## INTERNATIONAL KEYNOTE SPEAKER

### DR. HENRICH LANTSBERG

- Chairman of the Professional Communication Society of the *Popov Society*
- Head of the Science Information Department, the Institute of Radio Engineering and Electronics, Academy of Sciences of the USSR



## HOTEL RATES

Special IPCC room rate of  
\$89 plus tax for up to four people!

*When making reservations, be sure to state  
that you are attending the IPCC!  
Good from Oct. 26 through Nov. 3 1991.*

*Contact the Sheraton World Resort to secure the special conference rate.*

## CONFERENCE PARTICIPANTS

Participants will include leaders from the following areas:

- \* Engineering and engineering management
- \* Academic/research and development communities
- \* Information/communication practitioners and managers
- \* Designers and suppliers of innovative communication technologies

## A FEW ACTIVITIES

*Keynote luncheon, Wednesday, Oct. 30*

- Resume exchange.
- Jargon contest: To judge poor writing—at its best!
- Florida Breeze luau featuring roast suckling pig, gator tail, fresh fruit, and other delectables!
- Children's entertainment on Halloween evening, Thursday, Oct. 31.
- Dedicated shuttle bus service provided by the conference from the hotel to Disney World, Sea World, and Disney Village shopping.

## FOR MORE INFORMATION . . .

### 1) Conference Information

**General Chair, Dr. Daniel L. Plung**  
(803)642-4485  
Westinghouse Savannah River Co.  
P.O. Box 1308  
Aiken, SC 29801

### 2) Abstract Submittals

**Program Chair, Dr. Chris Forbes**  
(505)887-8689; FAX - (505)887-7758  
Westinghouse Waste Isolation Division  
P.O. Box 2078  
Carlsbad, NM 88221

### 3) Conference Registration

**William Kehoe, (301)953-5000**  
FAX - (301)953-1093  
The Johns Hopkins University  
Applied Physics Laboratory  
Johns Hopkins Road  
Laurel, MD 20723

### 4) Exhibits and Exhibit Space

**John Strack, (803)642-4490**  
Westinghouse Savannah River Co.  
P.O. Box 1308  
Aiken, SC 29801

### 5) Publications/Jargon Contest/Resumes

**Barbara Strack, (803)725-4909**  
Westinghouse Savannah River Co.  
P.O. Box 1308  
Aiken, SC 29801

### 6) Hotel Registration

**Sheraton World Resort**  
(800)327-0363  
FAX - (407)352-3679  
10100 International Drive  
Orlando, FL 32821-8095

## JARGON CONTEST:

*If you can match this example  
of poor writing, submit it to  
the IPCC Jargon Contest!*

"Deviation from the aforesaid shall be transmitted to the Cognizant Quality Function as items existing in significant-condition-adverse-to-quality mode and the transmission shall be documented as such in accordance with QA Procedure II-11, paragraph 4.3.5.2."



## Is There a Patent Attorney in PCS?

by Rudy Joenk

The June 1979 issue of the *Transactions* was a topical one on patents. In 1982 we revised and updated that issue and added new papers and published a soft-cover book titled *Patents and Patenting for Engineers and Scientists*. A recent large purchase by Colgate-Palmolive Company in Piscataway, NJ, has nearly exhausted our stock of *Patents*.

The book has about 100 *Transactions*-size pages comprising 22 papers (most written by attorneys), a bibliography, a glossary, sections of the patent law, and an index. It was a very successful publication considering the minimal marketing exposure it had.

As editor of that publication, I began the work when I was in IBM's patent department. I've been away from patenting for quite a few years now and although I think

the patent book should be redone, I don't feel comfortable—from the technical side—in doing it alone.

So I'd like to recruit one or more patent attorneys, preferably IEEE and PCS members, to be guest editors with me on a new edition. This involves determining the topics, identifying authors, inducing them to write, having their papers refereed (i.e., reviewed by peers), and overseeing revision and editing. We could have both invited and contributed papers. The entire process from now through production would take between one and two years.

If you're interested, I'll be glad to send you the 1982 book and talk with you further. Phone: (914) 742-5665; fax: (914) 742-6034; Internet: r.joenk@ieee.org; mail: IBM Corporation, 500 Columbus Ave., Thornwood, NY 10594. ◀

## The Delphi Technique

by Bruce Brocka

The Delphi technique is an iterative approach to arrive at a consensus of a group of experts. Getting experts to agree is a difficult task, especially when they are in the same room. The Delphi technique is a relatively simple way to arrive at a group consensus. Note that it is a consensus technique—not a technique to combine expert opinion. The analytical combining of opinions is a relatively new field of great interest to artificial intelligence developers as they often faced with the task of sorting out conflicts in expert opinion.

The experts receive whatever it is they are to review and comment upon. Without discussion with one another, they send in their response to the facilitator. All comments are annotated to the work, and redistributed to the group. This continues until a consensus is reached, and may require three or four or more trials.

The Delphi technique is similar to other group consensus techniques, but it is particularly useful in eliminating personality clashes in technical areas. It is also useful whenever powerful personalities are likely to dominate discussion.

### The Process

1. Clearly define the task you want the experts to comment or work on. Establish a monitor group to determine objectives, design questionnaires, tabulate results, and so on. This monitor group should be well grounded in team techniques, and statistical tools such as Pareto analysis.
2. Establish criteria to select between legitimate multiple alternatives. For example, is the cheapest solution the always best? This criteria should be made known to the experts.

## Inept Managers Bring Out Worst in Subordinates

Ineffective, narcissistic leaders bring out several forms of behavior in their subordinates:

- Groupthink. Workers feel they must censor what they say in meetings because it's too dangerous to challenge the boss.
- Distortions of the truth. Subordinates feel an unusually strong impulse to twist the facts around to please or agree with the boss.
- Tension. Employees don't feel like themselves in the boss's company.

- Humorlessness. The tone is grim; there's no joking around with the boss.
- Blind loyalty. The executive makes excessive demands on workers to show loyalty, such as insisting they not share information with other departments, putting loyalty above doing what's best for the organization.

—Wharton Center for Applied Economics. ◀



3. Identify the experts. Conventional wisdom places experts at least 50 miles away from where you are. This is silly. Don't overlook experts in your own backyard. Experts can be found by examining trade and society publications, classified advertisements, and word of mouth. Ask local professors or others who the experts might be (don't overlook the professor as an expert either). Then ask yourself (and the monitor team) if you really need the best expert in a field, or an expert in the field. How specialized must we be? For example, if we want to guess the rate of inflation for the next 12 to 60 months, we can probably cull information from magazines, journals, and newsletters and combine this information (being careful to note which sources are reporting from other sources, and which sources are originating their forecasts). At the other extreme, do we require an expert in electronic system environmental stress screening? There are probably only a dozen or so recognized experts in this field. Be wary of experts with vested interests (i.e. never ask a siding salesman if your house could stand a facelift).
4. Send out the tasking for round one of opinion.
5. Consolidate the opinion after receiving all opinions. This must be done in a way that in the next review process, the opinions are anonymous.
6. Send out the task again, this time with all comments.
7. Examine for consensus, repeat until a consensus or at least clear alternatives are reached; there can be legitimate alternative views. Another round may be appropriate to determine how to select among the alternatives.

### Example

A small monitor team of four people is established internal to a company that produces parts to

vehicle manufacturers. This team is to "crystal ball" the near term (18 to 24 months away) on external impacts to the company. This team will oversee the Delphi team of several experts. A questionnaire is designed that has both open and closed form questions. After each round the experts are given feedback on the survey, including how many (but not who) responded to each answer on the closed form questions. Comments and open form questions are disguised as much as possible. After three rounds, the panel of experts has arrived at the following:

1. Raw material prices will increase 5-7%
2. Inflation will be 5-6%
3. Major buyers will establish quality rating schemes. No central scheme, therefore each buyer will have its own scheme, leading to increased burden in administration.
4. Labor rates will rise 10-15%
5. Foreign competition will increase its market share 3-9%
6. Market share must be increased to 12% to maintain status quo

Notice that the last point is a conclusion drawn from the first five observations. Also note that point 3 is rather open ended, but may be something that the company can influence, either by pressing for industry wide standards, or by organizing the manufacturers they deal with, or by establishing a regional standard.

Also note that these are the final conclusions. It is reasonable to expect the experts to reference their work, so that a highly popular article (which may later prove inaccurate or otherwise distorted) does not skew the results. The experts also offered no solution to increasing market share. When it was becoming apparent that this alternative was going to be chosen, the monitoring team could have expanded the "How" questions and pared down the "What" questions.

### Do's and Don'ts

- The facilitator should not have expertise in this area. A small amount of knowledge may lead to assumptions regarding similarity of opinion. It is best to recraft all of the responses (if they are handwritten) into an anonymous format, completely unedited.
- Be wary of multiple alternatives. Perhaps the objective was not clear.
- Don't short cut by using a "majority rules" on the first round. A minority opinion may emerge as the subtle winner over conventional wisdom.

*This article has been extracted from Mr. Brocka's forthcoming work: Total Quality Management: Implementing the Best of the Masters.* ◀

## BECOME FAMOUS!

### No Experience Necessary!

Write an article for inclusion in the *PCS Newsletter*. Any topic relevant to communication will be considered. Tell us about how you solved a communication problem (verbal/written/technical). Expound on your vision of the next generation of publishing. Delineate how communications saved your business from ruin and despair.

Submit your article (no more than 6 pages, double-spaced, and figures should be camera-ready) via paper copy, fax, or diskette (either ASCII or WordPerfect™ please) to:

Bruce Brocka, Editor  
*PCS Newsletter*  
 Executive Sciences Institute  
 1005 Mississippi Avenue  
 Davenport, IA 52803  
 Phone/FAX: (319) 324-4463

# TOOLS OF THE TRADE



by Cheryl Reimold

## *The art of listening* *Part 2: Three ways to listen*

Once, a friend came to me in a rage about a meeting with his boss. Their conversation went something like this:

**FRIEND:** And now, after all this work, he tells me it's too long. Can you believe it? I told him I was ready to throw in the towel.

**ME:** (Worried) Oh, you didn't really offend him, did you?

**FRIEND:** (Turning away) No, as it happens I'm not actually a total idiot. Forget it; I'm sorry I brought it up.

I was taken aback, but I made a mental note to listen quietly from then on and to resist making comments.

But one day, as I sat nodding sympathetically at him, a colleague exploded: "Don't you have any thoughts about it? I thought you'd try to help!"

What was I doing wrong? When I began to study listening, I found out. My problem was not failing to listen but listening in the wrong way.

My angry friend needed quiet, supportive listening; my colleague, helpful, creative listening. To listen effectively—that is, to promote the sharing of ideas and goodwill—you must use the right type of listening. There are three

main types: supportive, active, and creative.

### **Supportive Listening**

The purpose of supportive listening is to help the speaker defuse, calm down, and settle into more rational thinking; the cue to follow for this listening type is an extremely emotional speaker.

Concentrate on giving your complete attention to the person—not the subject, the person. If you focus on the subject, you'll be tempted to comment or offer advice, exactly what the speaker doesn't want. Erase all other thoughts from your mind and avoid making stray gestures or getting distracted. Think "I'm just going to listen and show him I understand and support him."

---

*To listen effectively—that is, to promote the sharing of ideas and goodwill—you must use the right type of listening.*

---

An example might be:

**SPEAKER:** And now, after all this work, he tells me it's too long. Can you believe it? I told him I was about ready to throw in the towel.

**LISTENER:** I can imagine. You've had a lot to deal with.

**SPEAKER:** (Calmer) I sure have.

### **Active Listening**

The purpose of active listening is to help the speaker clarify a problem. For cues for this type of listening, look for the speaker who talks calmly about a problem but does not ask for advice or involvement. He uses "I" most of the time: "I have to figure out . . ." "I have a problem with . . ." and "I'm not sure how to deal with . . ." Concentrate on what the speaker is saying. When he makes an important point, paraphrase it

so as to draw attention to the essence of the problem. Do not add your interpretations or advice; he has not asked for them.

An example of this type of listening is:

**SPEAKER:** Serena and I have to write the report together, but I'm not at all sure how we're going to do it.

**LISTENER:** You need both contributions, but you're trying to decide how two people can write a unified report.

**SPEAKER:** That's it. Exactly.

### **Creative Listening**

The purpose of creative listening is to solve a problem with the speaker. Look for the speaker who says he wants to discuss a problem, asks you questions, and uses "we" and "you"; "Do you have a moment to discuss . . .," "What do you think we could do about . . .," and "Maybe you could help me figure out . . ." As in active listening, listen for the main points. Restate them or ask questions to make sure they're clear. Then pick up a point and try to add something to it.

An example of this interchange might be:

**SPEAKER:** He seems interested in the product, but I just can't get him to move. Do you have any ideas?

**LISTENER:** Do you mean you can't get him to buy? Or is there another step first?

**SPEAKER:** Well, he'd have to discuss it with his associates first. I don't think he's even done that.

**LISTENER:** Could you talk to any of the associates directly?

**SPEAKER:** That's an idea. I know one of them quite well.

Try these new skills. When someone starts talking, make a quiet diagnosis, then use the appropriate skill. If you feel it's not working, switch to another. Remember, if people want advice, they'll probably ask for it. If they don't ask for it, resist the temptation to give it anyway.

Cheryl Reimold is author of more than 100 articles and several books, including *How To Write a Million-Dollar Memo* and *Being a Boss*. Her firm, PERC Communications (6A Dickel Rd., Scarsdale, NY 10583, telephone 914-725-1024), offers businesses in-house workshops and courses in communication, writing, negotiation, and creative problem solving. ◀

## IEEE Book Warehouse Sale

### New!

*Writing and Speaking in the Technology Professions: A Practical Guide*  
edited by David F. Beer, University of Texas, Austin. Available August 1991.  
Order: #PP0278-2-PIE. 280 pp., softcover. Member: \$24.00; List: \$29.95; **Sale: \$20.50**

### Back in Print!

*Real-World Engineering: A Guide to Achieving Career Success*  
by Lawrence J. Kamm, 1991.  
Order: #PP0273-3-PIE. 256 pp., softcover. Member: \$15.00; List: \$19.95; **Sale: \$13.00**

Note: This is the IEEE edition of a book previously published by McGraw-Hill Book Company under the title *Successful Engineering*.

### Sale!

*The Engineer In Transition to Management*  
by Irwin Gray, 1979.  
Order: #PC0116-4-PIE. 160 pp. Member: \$20.00; List: \$24.95; **Sale: \$14.00**

### Sale!

*Guide for Writing Better Technical Papers*  
edited by Craig Harkins and Daniel L. Plung. 1982. Order: #PP0153-7-PIE. 288 pp., softcover. Member: \$20.00; List: \$24.95; **Sale: \$14.00**

### Only \$5.00 Each!

*The Space Station: An Idea Whose Time Has Come*  
edited by Theodore R. Simpson. 1985.  
Order: #PC0176-8-PIE. 320 pp. Member: \$18.50; List: \$22.95; **Sale: \$5.00**

*Electrical Engineering: The Second Century Begins*  
edited by Harlow Freitag. 1986.  
Order: #PC0200-6-PIE. 200 pp. Member: \$28.00; List: \$34.95; **Sale: \$5.00**

*Energy & Man: Technical and Social Aspects of Energy*  
edited by M. Granger Morgan. 1975.  
Order: #PP0051-3-PIE. 536 pp., softcover. Member: \$22.50; List: \$27.95; **Sale: \$5.00**

*General and Industrial Management*  
by Henri Fayol and Irwin Gray. 1984.  
Order: #PC0172-7-PIE. 128 pp. Member: \$15.00; List: \$19.95; **Sale: \$5.00**

*Insights into Personal Computers*  
edited by Amar Gupta and Hoo-min D. Toong. 1985. Order: #PC0182-6-PIE. 396 pp. Member: \$32.00; List: \$39.95; **Sale: \$5.00**

*Biological Effects of Electromagnetic Radiation*  
edited by John M. Osepchuk. 1983.  
Order: #PC0159-4-PIE. 608 pp. Member: \$60.00; List: \$79.95; **Sale: \$5.00**

*Marketing Technical Ideas and Products Successfully*  
edited by Lois K. Moore and Daniel L. Plung. 1985. Order: #PC0179-2-PIE. 400 pp. Member: \$35.00; List: \$44.00; **Sale: \$5.00**

*Next Generation Computers*  
edited by Edward A. Torrero. 1985.  
Order: #PC0188-3-PIE. 360 pp. Member: \$40.00; List: \$49.95; **Sale: \$5.00**

*A Century of Honors: The First One-Hundred Years of Award Winners, Honorary Members, Past Presidents, and Fellows of the Institute*  
1984. Order: #PC0171-9-PIE. 456 pp. Member: \$25.00; List: \$49.95; **Sale: \$5.00**

*Computers and Manufacturing Productivity*  
edited by Ronald K. Jurgen. 1987.  
Order: #PC0204-8-PIE. 320 pp. Member: \$40.00; List: \$49.95; **Sale: \$5.00**

*VLSI: Technology and Design*  
edited by Otto G. Folberth and Warren B. Grobman. 1984.  
Order: #P0174-3-PIE. 320 pp. Member: \$44.00; List: \$54.95; **Sale: \$5.00**

*Teaching Engineering: A Beginner's Guide*  
edited by Madhu S. Gupta. 1987.  
Order: #PC0223-8-PIE. 288 pp. Member: \$25.00; List: \$32.95; **Sale: \$5.00**

*Engineers and Electrons: A Century of Electrical Progress*  
by John D. Ryder and Donald Fink. 1984. Order: #PC0166-9-PIE. 272 pp. Member: \$32.00; List: \$39.95; **Sale: \$5.00**

### Yours For Just \$10.00!

*Engineering Excellence: Cultural and Organizational Factors*  
edited by Donald Christiansen. 1987.  
Order: #PC0218-8-PIE. 280 pp. Member: \$32.00; List: \$39.95; **Sale: \$10.00**

*Being the Boss: The Craft of Managing People*  
by L. Kent Lineback. 1987.  
Order: #PC0205-5-PIE. 192 pp. Member: \$24.00; List: \$29.95; **Sale: \$10.00**

*Oliver Heaviside: Sage in Solitude*  
by Paul J. Nahin. 1988.  
Order: #PC0227-9-PIE. 344 pp. Member: \$28.00; List: \$34.95; **Sale: \$10.00**

*Writing Reports to Get Results: Guidelines for the Computer Age*  
by Ron S. Blicq. 1987.  
Order: #PC0215-4-PIE. 216 pp. Member: \$22.50; List: \$27.95; **Sale: \$10.00**

*Effective Meetings for Busy People: Let's Decide It and Go Home*  
by William T. Carnes. 1987.  
Order: #PC0203-0-PIE. 368 pp. Member: \$28.00; List: \$34.95; **Sale: \$10.00**

*Career Management: A Guide to Combating Obsolescence*  
edited by Harold G. Kaufman. 1975.  
Order: #PP0049-7-PIE. 448 pp., softcover. Member: \$17.50; List: \$21.95; **Sale: \$10.00**

*Space Science and Applications*  
edited by John H. McElroy. 1986.  
Order: #PC0190-9-PIE. 260 pp. Member: \$52.00; List: \$64.95; **Sale: \$10.00**

Send orders to:

IEEE Press  
445 Hoes Lane, PO Box 1331  
Piscataway, NJ 08855-1331

For a complete sale list, write to Marybeth Hunter at the above address. ◀

# The Communicator's Creed

**I believe** that good communication is essential to our growth as a world community. I have an obligation to facilitate the flow of knowledge and aid understanding.

**I tell the truth**, because the slightest lie, the smallest incidents of lazy thinking, impede the flow of knowledge and understanding. Impeding understanding, whatever the excuse, is unacceptable to me.

**I understand** that the messages I help to put out into the world have an undeniable ripple effect on people. When I send a message, I alter things, however slightly, forever. My goal is to change things for the better.

**I aim carefully**. Like David, who searched for the smoothest round stones to hurl accurately at his target, I carefully select my messages and aim to hit the target.

**I am economical** because the communications I give away cost my audience their time. If my mes-

sage is inaccessible and inefficient then I take something from my audience that cannot be replaced.

**I am responsible** to the people I work with because, to some degree, how I interact with them and how I perform affects their own development, performance and livelihoods.

**I have confidence** in my ability to generate ideas. I'm never afraid to give ideas away and have them used immediately by myself and others. An idea without action is nothing, and action without an idea is less.

**I learn** something new about communications techniques and technology regularly. And, I learn continually about my audiences. This demonstrates respect for my audience, which aids understanding.

**I develop** in myself the ability to work in many media. My audience demands it. If I work only in some

media, I risk limiting the audiences for my messages.

**I respect** my environment, keeping in mind that the messages I produce often consume resources and create waste and by-products.

©1991 Christopher Parker.

Christopher Parker is a Manager of Editorial Programs at Price Waterhouse. ◀

## Newsletter Schedule

The *Newsletter* publication and deadline schedule is as follows:

DEADLINE      ISSUE

September 27      November

Please send your contributions to the following address:

Mr. Bruce Brocka  
1005 Mississippi Avenue  
Davenport, IA 52803  
(319) 324-4463 ◀

