

# Newsletter



IEEE Professional Communication Society

## General Impressions of IPCC'88

The title of IPCC'88 was "On the Edge: A Pacific Rim Conference on Professional Technical Communication," and it fully lived up to its name. From the time attendees arrived at Sea-Tac, the international airport located between Seattle and Tacoma, Washington, until they departed, everyone was aware that they were at the literal edge of the Pacific Rim, and were as well as at the metaphorical edge of new professional communication methods and a new era in commerce and technical interchange, where mastery of these methods will be a must.

Perhaps because the Conference had an appealing geographic location in the Pacific Northwest on the shores of Puget Sound, many participants took the opportunity to bring along spouses, parents, children, in-laws and friends. Some came from as far as France and The Netherlands. Many crossed the border from Canada. The majority, though, came from all parts of the U.S., making this the most well-attended Conference to date, with registrations up one-third from the previous record set in 1986.

Those fortunate enough to arrive on Tuesday, October 4 had the opportunity to socialize informally at a festive pre-conference party sponsored by IBM, fea-

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## At Ease: Five Simple Cures for Public-Speaking Panic

It's a waking nightmare. As the stranger announces your name, you rise, clutching sweat-stained notes, and begin the terrifying walk to the podium. Your heart pounds, your eyelids twitch and your tongue feels twice its normal size. You doubt you will make it to the lectern, let alone to the end of your speech. When it's over, you vow never again to accept a speaking engagement.

Does this scenario sound familiar? It does to millions of businesspeople who must make presentations that could be crucial to their careers. According to national surveys, public speaking is the number-one fear of most executives. Every year, I coach hundreds of men and women who suffer from stage fright that ranges from butterflies to utter panic.

Every time Chris Halpert\* had to make a presentation, her heart beat so hard and fast that she wanted to bolt from the room. She would agonize for days over an upcoming presentation, finding it difficult to eat or sleep. Yet, she had no trouble selling herself in one-to-one situations, even in job interviews. After graduating from college with a degree in anthropology, Chris had become a secretary for a large aerospace company. A few years later, she decided to apply for an interesting job that was posted on the company bulletin board, even though she didn't have the background in computers, graphics and English required for the position. Chris not only talked her way into the spot, but she also convinced the director to upgrade her title from proposal/graphics coordinator to marketing supervisor, a change that meant a sizable pay hike.

It also meant that she would regularly have to make presentations to higher-ups from corporate headquar-

\*pseudonym

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## From the Editor . . .

Well, it's that time of year again! It's hard to believe that another year has come and gone. We're now on the threshold of the 1990s—a decade that will certainly bring with it new levels of technological advancement and change on an international level.

The coming decade will also bring with it new challenges for engineers as they try to adapt to these changes. Of course, keeping up with technology and not falling prey to technological obsolescence is challenging enough for any professional. However, it will no longer be enough for engineers to be technically astute—they must become great communicators as well. And, engineers must communicate on an international level—an engineer's audience is no longer limited to his or her peers in a given state or country. Gone too are the days when an engineer (or anyone for that matter) remained with one company for life. Issues such as ethics and intellectual property ownership become more critical in today's environment.

PCS is working to address these challenges. While PCS must continue emphasizing the "how to's" of written and oral presentations, PCS also needs to address these larger issues as they relate to communications. IPCC '88, with its emphasis on communications issues in an international environment, is a testament to PCS' moving ahead with the times.

I would like to hear from you regarding particular challenges you face, or anticipate facing, as we move into the 1990s.



## Supercomputer Glossary Available

The Scientific Supercomputer Subcommittee of the IEEE Committee on Communications and Information Policy recently published *Supercomputing: An Informal Glossary of Terms*. The booklet lists both common and uncommon terms used in the supercomputing industry. It's intended to help both novices and experts communicate better and to provide a foundation for developing more definitions. Copies of the booklet are available from the IEEE Washington Office.



## Newsletter Deadline

Articles, news and comments for publication must reach the editor by the following dates:

Issue	Deadline
March	January 17
July	May 19

Send your contributions to Deborah Flaherty Kizer, AT&T-International, 1200 Mt. Kemble Avenue, Room A2B19D, Basking Ridge, NJ 07920.



# IEEE Professional Communication Society

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## IPCC'88

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turing an assortment of wines, cheeses and other refreshments. In the Visions Room on the twenty-eighth floor of the Stouffer Madison Hotel, speakers, moderators and members of the AdCom greeted each other and enjoyed a commanding night view of the city spread out below. One speaker did double duty: Carolyn Plumb, of the University of Washington, performed there as half of an instrumental/vocal duo that night and showed up promptly at eight the following morning to present a paper.

The Conference drew on the full resources of the hotel during the next three days. Many attendees were guests there, but all soon discovered that the third floor was the hub of activity between the sessions, held in three of the four surrounding Compass Rooms. The Courtyard Ballroom, one level below the lobby, was the scene of the vendor exhibits and the Awards Banquet. Last and far from least, the Governor's Suite on the twenty-seventh floor served as the hospitality center of the Conference. Here almost everyone, particularly spouses and others who came along to share the pleasures of the occasion, could drop by any time for refreshments, sight-seeing information, and a glimpse of the ferries and other vessels criss-crossing Elliott Bay. An unscheduled but highly popular event, new to these conferences, was a special tour of scenic points, conducted impromptu for spouses and such by Angela Henrick of the Steering Committee on Wednesday morning.

Part of the charm of this conference was the way the theme of the Pacific Rim returned, both in and out of sessions. At the Kickoff Luncheon Wednesday, the award for Best Paper appearing in the Conference Record went to "The Pacific Rim: Towards a Telecommunications Community," by E.M. Healy, who made the presentation, and Dr. R. P. Van Spyk, both of Pacific Bell, San Ramon, CA. For this paper, the authors had to prepare a special map centered on the Pacific and framed by countries around the Rim. So new are developments in communications between these countries, including the intermediate islands, that no commercial maps could be found which provided this overview.

On Wednesday evening, many seized the opportunity to gain yet another perspective on the Pacific Rim by embarking on the trip to Blake Island and Tillicum Village. Indian residents served a salmon barbeque there and entertained with a program of traditional dances performed in authentic tribal costumes. Afterwards, a rare film made some 70 years ago by famed photographer Edward S. Curtis was displayed on TV

monitors. On the boat ride to this event, the pilot provided a commentary on sights around the harbor. The trip gave added significance to Conference Chair Gary Greenup's fine photo of the Port of Seattle, printed on the cover of the Conference Record. The sight of the planet Mars ablaze overhead, closer than it would be again until the year 2003, enhanced this excursion still more.

Thursday's sessions included papers broaching problems related to language and cultural barriers at the Edge. These had been touched upon the day before in an address at the luncheon by Dr. Robert Kapp of the Washington Council on International Trade and would be asserted strikingly in yet another way by Banquet Speaker Jean Enerson, the popular news anchor for KING-TV in Seattle. The presence of these two invited speakers at the Conference, whose background and experience were distinctly non-technical yet thoroughly relevant to the underlying theme contributed new meaning and depth to the observations being shared during some of the sessions.

No visit to Seattle would be complete without a tour of a Boeing facility, and on this occasion a group of more than 50 persons boarded busses provided by Boeing to transport them on Thursday afternoon to the commercial aircraft plant at Everett, WA, approximately 25 miles north of Seattle. The giant 747 and 767 aircraft are assembled there, in the largest building in the United States. This tour, together with the Kickoff Luncheon address of Timothy Fehr, Vice President of Boeing Electronics, and their full underwriting and printing of the Conference Record, marks Boeing as the major industrial contributor to IPCC'88.

The high level of interest and participation in the Conference carried right through the last day, many attendees planning to explore the very scenic environs over the weekend. At the Valedictory Luncheon, Peggy Thompson of Aldus Corporation completed the cycle of theme-related events with a colorful presentation titled "Publishing and the Pacific Rim," which stimulated both left and right brain responses in the audience as she punctuated the fact-filled portions of her talk with a series of aesthetically pleasing visuals incorporating Far Eastern sights and symbols. This carefully prepared ocean-spanning intercultural blend of ideas and impressions provided an unexpected but fitting conclusion to the material focused on the Pacific Rim motif. No longer would the Edge seem quite so abrupt.

—John Henrick



# President's Column

## PCS Organization Spreads Responsibility and Seeks New Recruits

The PCS Constitution specifies that the PCS shall have elected officers consisting of a president, a vice president, and 18 members of the Administrative Committee (AdCom). It also mentions committees and chairpersons, appointed by the president.

Halfway through last year, when I had developed a first-hand feel for the duties of the president and how the organization was functioning, and in consultation with others, I devised the organization chart shown below. This functional organization was subsequently approved by the AdCom.

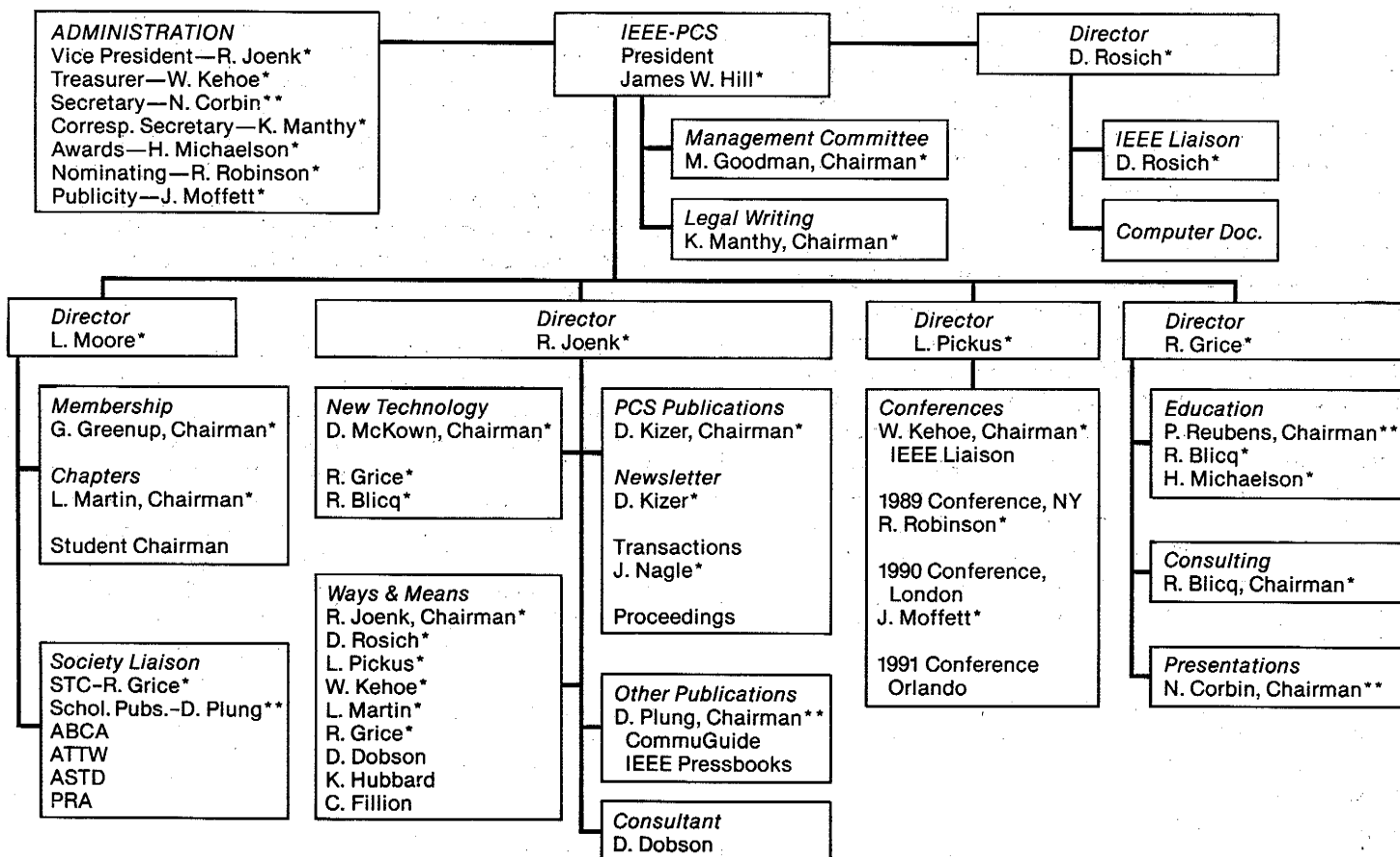
In this new organization, all elected officials and AdCom members have equal votes as before, but

some of our past presidents and senior members have been appointed as directors of functional areas. Grouped under them are the chairpersons of a number of committees. In planning and executing their responsibilities, the committee are run by chairpersons who report to the AdCom through the directors.

The reorganization has two purposes. The first is to capitalize on the experience of some of our past officers and senior members by placing them in the capacity of overseers; and the second is to give us two-deep leadership that will guarantee that each committee area is represented at each AdCom meeting.

One of the worst features of our PCS organization in the past has been that most committees have not operated very effectively between AdCom meetings. Individuals have, but committees have not. The AdCom is too large to call together more frequently than four times a year, and even too large to set up a telephone conference call.

IEEE-PCS FUNCTIONAL ORGANIZATION CHART 1988-1989



\*Elected AdCom Members

\*\*Ex-Officio AdCom Members

Under the new organization, the president and the officers, or the president and the directors, can participate in a conference call at any time. The directors can have conference calls with their chairmen, and the chairmen with their committees. I encourage this type of continuous activity.

The reorganization also makes it possible for more members to become active in the business of the society. I firmly believe that our society will grow and be effective in proportion to the number of people who actively participate in its affairs. Many people join after presenting papers or attending conferences. Another good route is to get them to serve on our committees.

Expanding our committee structure should also give us a broader base for developing, testing, and choosing future officers and AdCom members.

I ask that every PCS member who is ready, willing, and able to serve on one of our committees contact me at the earliest opportunity. We'll put you to work.

Many interesting positions are also available on committees of The Institute itself. These high level committees help to influence Society and National policy relating to science and engineering.

All of these activities need good communicators.

All of these activities need YOU!

—Jim Hill  
PCS President



## Home Video Tutorials

The IEEE has introduced a line of video tutorials for use in the home or the office. Six topics are available so far, including robotics for the electrical engineer, the role of artificial intelligence in manufacturing, and nonsymmetrical short circuits (part of a series on power-system fault analysis). The price to members is \$49.95 for each video. *Contact: Home Video Tutorials Coordinator, IEEE Educational Activities Dept., Box 1331, Piscataway, NJ 08855; (201) 981-0060, ext. 423.*



## At Ease: Cure Public-Speaking Panic

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ters. Fearing that her public-speaking phobia would prevent her from advancing in her company, Chris sought my help. "How," she asked, "can I control my nervousness so it doesn't block my message?"

I told her what I tell all my clients: that it's normal to feel uncomfortable if public speaking isn't something that you do all the time. Human beings are creatures of habit. We like to stay where we feel comfortable—seated in a chair. The moment you stand to speak, the dynamics change. It's no longer one-to-one—it's one to a group. You become the focus of attention, the leader who is expected to perform. Even the distance changes in this new arena: The larger the group and the more formal the presentation, the greater the distance between you and your audience. When you're in this unfamiliar situation, adrenaline floods your body as you gear up to handle the perceived challenge—the threat of audience disapproval. Your rapid pulse, quickened breathing, sweaty palms and shaking knees are physical signs that your fighting instincts are aroused.

Nervousness is natural—and it can be a blessing. Without that rush of adrenaline, that tension "high," you could seem like a passionless speaker, bored with your topic and uninterested in communicating with your audience. It's up to you to harness that energy, so it works for you instead of against you. The next time you have to give a speech or make a presentation, use these techniques to turn panic into power.

### 1. Test your fears against reality.

To get to the bottom of her public-speaking panic, I asked Chris what she feared most about making presentations. She told me, "I'm afraid I'll make a mistake and look foolish." Next, I asked her to name the worst thing that could happen if she did slip up. "People wouldn't consider me as competent as I would like them to," she replied. "Would you be fired?" I asked. She admitted that this was unlikely. "I'm good at what I do and my boss knows it," she said.

When Chris considered the "worst-possible" outcome, she realized that many of her fears were groundless. They stemmed from imaginary, "what-if . . ." scenarios that, when analyzed, didn't carry the dire consequences she had been conjuring up. Because Chris' worst "what-if" worry—"What if I make a mistake?"—was something she could live with, she began to feel more positive about public speaking.

## 2. Reassure yourself.

Behavioral research has revealed that 77 percent of our thoughts are negative. You're more likely to dwell on the worst that could happen than to anticipate a happy outcome. These negative messages sap your energy and sabotage your efforts. Because it's hard to change thought patterns, I told Chris to prepare enough positive messages to counteract any negative thoughts that might enter her mind before, during and after her presentation. Days before she had to speak, she began telling herself: "I am well-prepared. I have been asked to make this presentation because I am knowledgeable in this area. I am excited about my topic and delighted to have the opportunity to share what I know with my audience. I am the expert; my audience wants to hear what I have to say."

You should cleanse your mind daily. For every negative message that can undermine you, you should have a positive one to wash it away.

## 3. Practice, practice, practice.

You should rehearse your speech many times. Someone once said that "preparation is the greatest substitute for talent that you can find." It's also great insurance against panic attacks.

For over a week, Chris rehearsed her presentation out loud while driving to and from work. Because she had recited her speech so many times, when it came time to give it, Chris found that her tongue had developed "muscle memory." The right words to express her ideas were on the tip of her tongue. She didn't flounder, trying to remember what she wanted to say.

Without adequate preparation and practice, you waste your energy trying to recall the order of your ideas. You focus on your speech—not on the people listening to you. It's only when you know your material "cold" that you can concentrate on connecting with your audience.

## Write a Winning Speech

Do you have to write a speech or a sales presentation and find yourself at a loss for words? To help you overcome your fear of the blank page, here are some tips from *You Can Talk to (Almost) Anyone about (Almost) Anything* by Elaine Cogan and Ben Padrow:

1. *Pick a subject suitable for your particular audience.* Focus the topic so you don't tackle an issue too big for a single presentation.
2. *Don't write your speech from beginning to end.* Cull information and mull over ideas, jotting down facts, anecdotes, ideas, jokes and statistics when they come to mind or when you read them. To help you stay organized, keep these tidbits on separate sheets of paper.
3. *Spread your "deck" of ideas on the floor* and shuffle the papers around until the information seems to flow in a coherent order.
4. *Divide the papers into three logical piles:* introduction, body and conclusion. Then start to draft your speech, adding the appropriate connecting anecdotes, phrases and paragraphs.
5. *Use short words and paragraphs, direct nouns and verbs.* Avoid long-winded descriptions. An analysis of President Reagan's speeches revealed that 90 percent of the words contained only one or two syllables. Three-quarters of the memorable Gettysburg Address contains words of five letters or less.
6. *Do more research* or consult a knowledgeable colleague to fill in the gaps if your speech seems sketchy or lacks substance.
7. *Fit the missing information into your draft.* You now should have the body of your speech—"no more than three cogent ideas that have been expanded sufficiently but not to infinity, written in a clear style that can be spoken."
8. *Write the finale,* summarizing the points of your presentation and adding a personal touch ("This is what I intend to do . . .").
9. *Now you're ready to write an introduction that will draw your audience into your speech—*use a captivating anecdote, a startling statistic or a question that will make people sit up and take notice.
10. *Finally, practice your speech* so your delivery is worthy of your words.

#### 4. Watch your body language.

To command people's attention, you must appear self-assured and in control. Studies have shown that your body language can carry more weight than your words. Another client, Trish Winters,\* had to sell her coworkers on a new computer system, and was afraid that her nervousness would result in a lack of confidence in her and in the project. It was imperative that she look and sound confident, even if she was not yet feeling it, in order to convince those who opposed the new computers that the system was best for everyone. An audience usually responds to the

attitude that a speaker conveys through her stance, gestures, mannerisms and tone of voice.

Trish's body language broadcast how uneasy she was. She tended to stand with her weight on her left foot and her hip elevated, an awkward position that caused her right leg to shake and, in turn, triggered other nervous mannerisms. Her shaking leg shook her confidence, causing her to worry, "I must look like a fool," a thought that completely unnerved her. To stop her leg from jiggling, Trish would shift her weight from foot to foot, a noticeable movement that drew attention to her jitters.

### Word Perfect

"The voice is an executive's most vital and persuasive professional tool," says Deborah Ross, a communications consultant and former chief of the speech pathology department at the University of California at Davis. "If executives want power in the workplace, they need to examine the image conveyed by their voices. You can destroy your credibility in as little as 30 seconds if you sound whiney or unsure," she says. Here are some common vocal handicaps and tips on correcting them:

- **Speed**—The average rate of speech is 150 words per minute. If you speak too quickly, your listeners will think your message is not important enough to be explained properly and that you are indifferent toward it. Also, speaking rapidly communicates that you are nervous or uncomfortable. Concentrate on enunciating clearly and slowing down.
- **Pronunciation**—You can appear just as ignorant saying a word incorrectly as using it incorrectly. Find the correct pronunciation for the words you use. If you don't know the proper pronunciation of a word and there is no time to look it up, choose a synonym.
- **Rising voice**—Rising intonation makes your statements sound like questions, and makes you seem unsure of yourself and easily intimidated. To make statements that communicate authority, practice lowering your voice during the last two or three words of your sentences.
- **Fadeaway sentences**—If you lower your voice and let your sentences trail off, you will seem as if you lost your train of thought—or you will sound as if you doubt your words or as if you are seeking approval. During a confrontation, a fade-

away voice makes you seem like you're afraid.

- **Intonation and stress**—Stressing key words gives meaning to a sentence. To add variety to your voice, develop a dramatic air when speaking. Your voice may sound contrived to you at first, but people will respond to you more enthusiastically. In the following example, different words are emphasized in the same sentence. Read each sentence out loud, stressing the key word. You'll see that the meaning of the sentence changes as the emphasis shifts:

My product sells itself  
My *product* sells itself  
My product *sells* itself  
My product sells *itself*

- **Voice pitch**—To find your natural pitch, sigh, yawn or say "mm-hmm." Your speaking voice should be at the same pitch as your voice is when you make these sounds.
- **Nasal pitch**—A nasal voice makes you sound like a complainer, whiney and immature. Find out if you have a nasal pitch by touching the sides of your nose when you speak. If you feel vibrations, too much air is passing through your nose, giving your voice a nasal quality. You may not be opening your mouth wide enough when you talk—a nasal pitch is usually created by the tongue being carried too high. If you drop your jaw more when you speak, your tongue will also drop, preventing air from going through your nose.
- **Filler words**—If your speech is filled with interjections such as "um," "like," "you know" and "well," try placing a bet with a friend or colleague. Pay her a quarter each time she catches you using one of these words.



To prevent this self-defeating dance, I told Trish to stand with her feet about 10 to 12 inches apart, with her weight evenly distributed on the balls of both feet. This reduced the tension in her legs. Next, I had her square her shoulders, raise her rib cage and hold her head up, so that she looked like someone who had a right to speak on her subject. Trish discovered that when she stood tall in a "planted" position and energized her body from the waist up by using gestures, she spoke with more authority. As a result, people responded to her favorably, and she gained confidence.

Also, once she stood up straight, Trish found it was easier to breathe deeply, which relaxed her. This increased the oxygen supply to her lungs and gave her the breath support necessary to project her voice. Lack of tension and fuller lung capacity made her voice stronger and more resonant.

#### 5. Ask for feedback.

Ken Blanchard, the author of *The One Minute Manager*, calls feedback the "Breakfast of Champions." After your speech, ask colleagues whom you trust to critique your presentation. Most likely, you'll discover that other people are less demanding critics of your performance than you are. Many of the things that worry you are invisible to your audience. Did your knees shake? Did you lose your place? In most cases, you'll find people didn't notice.

If you do hear criticism, don't torture yourself with your mistakes. Learn from them so that your next presentation will be first-rate.

After you've perfected my five techniques, public speaking still may not be your favorite pasttime, but it won't be your worst nightmare either. And it's one of the best ways to gain visibility in the business community. When you become more confident center stage, you should seek out opportunities to speak, even if it's only to members of your network or to the PTA. As the renowned orator Demosthenes once said, "Small opportunities are often the beginning of great enterprises." So, why not begin!

—Mary Jane Mapes

—Reprinted with permission from *The Executive Female*, the bimonthly publication of the National Association of Female Executives, 127 West 24th, N.Y., NY 10011, (212) 645-0770.



## For The Record

How to meet the press without losing your cool, confidence or credibility

It's finally happened. As a result of *who* you are, *what* you've done or *how* you've done it, people are interested in your views. Now you have a chance to express your opinions and share your expertise, for holding on your phone or camped in your outer office is the human embodiment of the public desire to know: a representative of the media.

How well you handle your encounter with the media will reflect on your reputation as a spokesperson in your field. Indeed, your career itself may be shaped for better or worse by how you come across in a newspaper or magazine article, or how well-informed you sound on radio or television.

Successful professionals view an interview with the press as an opportunity to promote their causes, benefit their organizations and boost their own careers. One Midwestern executive says, "Approach every interview from the standpoint of 'What's in it for me?' Then, after you've decided that the interview can help you and your cause, go after it with everything you've got. It'll pay off."

By rehearsing and applying some time-tested interview techniques and "tricks" you can get your point across while burnishing your image as an up-and-coming leader in your field.

#### Getting Ready

Whether you are to be interviewed on television or quoted in the morning paper, the following tips will help you prepare to meet the press.

- *Ask the angle of the story.* Find out the topic and the angle of the interview. If you are a manager in a cosmetics company and a reporter calls, you need to know if she is doing a story about your industry, new make-up trends or cosmetic allergies. For a story on cosmetic allergies, you must be ready to explain why your company's products are safe. Your message might be, "We have eliminated all ingredients in our makeup that irritate sensitive skin. Our clinical tests have shown . . ."

You can't prepare for an interview until you determine a reporter's intent.

- *Check out your interviewer.* What kind of reputation does he or she have? Is she known as probing but



fair or as someone who likes to stir up controversy? You can't change her tactics, but you can decline to be interviewed or prepare for loaded questions.

Never consent to do a newspaper or magazine interview on the spot. Always call the media to check a journalist's credentials and to research the publication or program and its audience. Make sure it's a vehicle that will show you at your professional best. Being quoted in *The National Enquirer* won't enhance your reputation.

If you're going to be on a radio or TV show, review the program to get a sense of the interviewer's style and the type of questions he or she asks. Dorothy Sarnoff, founder of Speech Dynamics, Inc., and author of *Make the Most of Your Best*, says, "When I was invited on Tom Snyder's show, I watched the program before my appearance. I observed that Snyder prepared about four questions for each guest—enough for the articulate (to get their message across) but not for the timid. To make the interview pay off, I knew I needed to be ready with lots to say about making speeches—and to work in my objective of informing executives that my techniques were available on tape."

- *Anticipate your interviewer's questions.* Write a list of potential questions. Put yourself in the position of both the reporter and the audience to determine what they would want to know about the topic. Also, consider what you want people to remember as a result of your interview. That way, you can address the public's concerns and cover the points you want to make.

If you are prepared to field tough or embarrassing questions, you're more likely to stay cool when a reporter tries to push your hot buttons. For instance, if you're a brand manager for Power running shoes and sales are slipping, you should expect to be asked why Power sneakers are losing their appeal. Don't dwell on the problem; use the question to launch into a discussion of how you're solving it. You might say, "Now that our athletic shoes come in 10 colors, we expect women who want comfortable walking shoes, as well as joggers, to put on Powers."

Remember, you can control the interview. You don't have to be boxed in by replying to a reporter's question directly. You can "bridge" to the point you want to make. Jack Hilton, author of *How to Meet the Press*, says, "A bridge gets you from where you are in an interview to the safer ground of points of your choosing." Smooth transitions such as "Let me give you the facts" and "Let's consider the larger issue

here" will allow you to turn a tough question to your own advantage. For instance, in the previous example, the Power brand manager could say, "Let me put that into perspective. Fewer people are jogging today. That's why Power is pushing its new aerobic shoes, which come in 10 colors that complement today's fashionable exercise clothes."

Always be positive when you defend your position. Saying "Sales are slipping because . . ." or even "Sales *aren't* slipping . . ." reinforces a negative premise in the audience's mind. If Richard Nixon had said "I'm honest" instead of "I'm not a crook," his phrase wouldn't be remembered today.

"It's also a good rule of thumb that the tougher questions, the shorter your answers should be," says political media advisor Roger Ailes, author of *You Are the Message*. "Windy responses will sound like you're protesting too much."

However, a terse "no comment" will make your audience feel that there is truth to an allegation or that you're trying to cover up. Try to sidestep tricky questions by segueing to a specific point you'd like to make.

- *Do your homework.* You probably know your subject fairly well. Research what you don't know until you feel you can respond knowledgeably to just about any question. If you're using studies to back up your points, make sure the statistics are on the tip of your tongue. Also have anecdotes and/or quotes ready to support your point or an analogy that will hammer it home.

- *Practice your answers.* With a coworker or friend playing the role of your interviewer, practice responding to the questions you anticipate. Then, critique your performance and ask your "interviewer" to do the same.

If you are preparing for a TV or radio interview, keep your answers to three or four sentences. Don't respond to a simple query with an entire speech. You may be "on air" for only two minutes, and TV and radio news, in particular, deal in the 25-second response. Frame "headline" answers, brief but informative comments that get your point across quickly. Otherwise, you may find yourself in the position of the long-winded dermatologist who discussed skin cancer in detail but failed to promote her company's sunscreen before her time was up. And, if you keep your replies short and to the point, you're less likely to have your meaning distorted by editing.

### It's Time

The interview itself should be a breeze if you have prepared and you think positively. When you're center stage, here are some pointers to keep in mind.

- *Recognize "stage fright" as normal.* Professional actors and veteran newscasters admit that they suffer from butterflies before their performances, too. The best of them report that controlled nervousness actually gives their performance an edge and keeps them alert. It should do the same for you.

One way to control nervousness, according to Sarnoff, is to put yourself through an intense and imaginative cataloging of "worst-case" possibilities. "After you've imagined the worst, rewrite the 'script' several different ways," she says. Then, you'll be able to handle yourself if you're asked a hostile question or if you have to make a point in less than a minute.

- *Be courteous, positive and alert.* You want to come across as the decent human being you really are. You can be on the lookout for tricks or trouble without being aggressive or sarcastic. Don't overlook the value of a smile and a handshake with a reporter, at both the beginning and the close of an interview. These actions make you appear gracious as well as professional, particularly if the interview is televised.

- *Speak plainly.* Make it easy for the average person to understand you. Steer clear of professional jargon, pop-management buzzwords and psychobabble. It's vital that your message comes through loud and clear. If you confuse the reporter and the public, your quote or important point may be cut from the article or interview.

- *Tell the truth.* Your reputation for truthfulness is your most valuable asset in dealing with the minions of the media. If you make a mistake or give erroneous information in an interview, correct yourself as soon as possible, either during the session itself (preferably), or by calling your interviewer as soon as you get your facts straight. Keep in mind that the longer you take to correct the error, the greater the chance that wrong information will get into print or on the air.

Don't elect to let a mistake "ride," hoping that no one will discover your misstep. The world is full of people who love to deflate public figures by pointing out their errors—loudly. You take much of the sting out of a mistake when you fix it yourself.

Your interviewer and his or her audience will forgive you if you make a goodfaith mistake—they *won't* if

you lie to them. Don't tarnish your image by lying to cover up or defuse an issue that will soon be forgotten anyway. As far as most reporters are concerned, if you lose your reputation for truthfulness, virtually all your future statements as well as actions become suspect.

If you cannot or will not answer a particular question, say so and give the reason why: You would be giving away a trade secret or whatever the case may be. If you will be able to answer at a later time, say so and tell when. Then, keep your promise to get back to an interviewer. It all adds up in building that precious asset: your credibility.

- *Take and maintain control of the interview.* It's not as hard to do as you might think. Taking control simply means finishing your answers when an abrupt interviewer attempts to cut you off. It means talking over an interruption, if necessary. It means speaking up if an interviewer has misunderstood, misquoted or twisted a statement you just made. And it means backing up your position with facts and figures.

Taking control doesn't call for belligerence; it does mandate that you stick by your guns when you have a point to make or a position to state. "When you're interviewed by a reporter," says Ailes, "you shouldn't just be a backboard for his or her questions. You should gently take control so you get your point across. Don't wait for the interviewer to ask questions that will trigger your agenda points."

- *Say only as much as you planned.* Being asked to speculate may flatter your ego, but speculating can prove dangerous for you. Say only what you intended and no more. Beware of the "pregnant pause" ploy where your questioner continues to look expectantly at you without speaking when you have finished replying. She's hoping that, in an attempt to be courteous, you will keep the "conversation" going by saying more than you intended, perhaps revealing a confidence in the process. When you've said all you wanted to, just clam up and look your interviewer in the eye. She should get the message soon.

- *Beware of going "off the record."* Anything you say to a reporter is fair game for publication or broadcast. She is under no obligation not to use it, no matter what sort of "understanding" the two of you may have had in advance. Do not give information to an interviewer unless you are prepared to see it bandied about in the public arena.

- *Maintain your self-control.* It is not enough to maintain control of the interview. You must retain control

of *yourself*, too. As a professional, you cannot afford to lose your cool under tough or even unfair questioning.

Don't get mad and don't even think about trying to get even. Concentrate on getting your message across. Don't get sidetracked by your emotions when your intellect would serve you best.

That's all there is to an interview. There's really nothing to it. Nothing, that is, beyond a commitment to tell the truth and equally intense desire to tell the world about yourself and your business.

You really can be a winner in an interview. All it takes is confidence, candor and recognition of the fact that who you are and what you represent are of great interest to people. By responding wisely to that interest, you can serve your profession, your organization and yourself well.

—*Reprinted with permission from The Executive Female, the bimonthly publication of the National Association of Female Executives, 127 West 24st, N.Y., NY 10011, (212) 645-0770.*



## Ten Skills for Stepping Up

Norma Carr-Ruffino, professor of business at San Francisco State University, asked 110 women in middle to top management what helped them reach their present positions. The factors that they rated very or extremely important were:

- 89% communication skills
- 85% problem-solving/decision-making abilities
- 81% understanding the organization and its people
- 78% personal power (poise, serenity, inner resources, etc.)
- 75% being a team player
- 71% knowing how to motivate people to perform
- 63% political savvy
- 63% delegation/supervisory skills
- 54% having a mentor
- 53% technical skills

(Note: respondents could choose more than one answer.)



## Voice Power: How to Sound As Professional As You Look

Mary Ann Barbato\* was smart and sophisticated. She knew enough about the investments at the brokerage house where she worked to take over when her boss was on vacation. Yet, the management position that she thought she was growing up into wasn't materializing. Finally, a coworker told her why: An important client had remarked that Barbato "sounded like she came from the wrong background" to handle his multi-million dollar investment program.

- When Liza Maloney\* became supervisor of the word processing department for her busy law firm, production plummeted. Her subordinates started slacking off and Maloney wondered how she was going to meet her deadlines. Because she sounded tentative and apologetic when she issued orders, Maloney's staff didn't take her directives seriously.
- Margie Barnard\* was an ace accountant who had a Harvard MBA. But when she started working on the "floor" of a large bank, customers complained that they didn't have confidence in her and they couldn't understand what she said. Barnard spoke in a tiny, breathy voice.

These three talented, capable women share a common problem: They don't have "voice power"—that is, they don't sound as if they mean business. "Image makers" have long been telling us that appearance plays a part in getting jobs and promotions, but they haven't been as vocal about another important aspect of your professional image: your voice. You may be an expert in your field, but if you sound shrill, unsure of yourself or little-girlish, you won't convey your credibility or inspire confidence in people. And you may dress for success, but if you sound like you're from those "mean streets," the image that your voice projects can hold you back in certain industries.

The way you pronounce words and the pitch of your voice can create a poor impression and, in some cases, destroy your professional credibility. Look at it this way: If two jobs applicants have comparable skills, but one sound either lifeless, whiney or tentative, and the other sounds enthusiastic, pleasant or confident, who do you think will be hired?

A study by Dr. Albert Mehrabian of the University of California at Los Angeles indicates that the impression your listeners form has more to do with how you

\*pseudonym

talk than with what you say. The impact of a spoken message is based 38 percent on voice quality and 7 percent on content (the rest is based on body language). Don't wait for someone to tell you that you can't move up in your company or become a manager because your voice doesn't give the right impression. Pinpoint your weak spots and work on them.

To find out how you sound to other people, tape record yourself while you're on the telephone and when you're talking to colleagues. Do you drone in a monotone, sound unsure of yourself or mispronounce words? Is your voice too high-pitched or do you sound like a little girl? If you don't like the way you sound, the following exercises can help you develop a strong, confident voice.

### *Warm-Ups*

Relaxation is crucial for effective speaking. Tension anywhere in your body can prevent you from speaking powerfully, but stress in the muscles of your throat, jaw, neck, shoulders, chest and stomach particularly affects your voice. A tense throat strangles sound and changes the pitch of your voice; a tight jaw prevents you from articulating words properly. If your throat is relaxed, you can get the "breath support" that puts energy into your speaking voice. This means that you can take in enough oxygen to release your words on a steady stream of air.

Good posture is also essential for good speech. When you slouch, you stretch or put undue pressure on certain organs, creating overall tension in your body that can constrict your speech. To stand tall, imagine that you are a marionette supported by a string at the top of your head. From that point, your body should fall into proper alignment.

To relax your body, try this exercise: Lie down on the floor; if you can't naturally flatten the small of your back, put a small pillow under your head and shoulders or under your kneads. Then, progressively relax each part of your body, from your toes to your head. To get an idea of how this feels, tighten the muscles in your feet, then calves, then thighs, etc. and then relax them. You want to achieve this relaxed feeling when you are speaking, because sounds are produced when you exhale, when your muscles relax. (Your diaphragm, a large, dome-shaped muscle attached to the bottom of your rib cage, operates like a bellows. As you inhale, your diaphragm flattens; when you exhale, it relaxes.)

Next, you should relax your throat, neck and jaw so your voice will sound richer and more mellow. When

you tense these muscles, your vocal cords tighten, restricting the air flow that carries your words. A tight throat can make your voice sound harsh or strident. Before a speech, do stress-relieving head rolls: Keep your shoulders down and let your head fall forward, then gently roll it to your right, then back, then to your left, then forward, making a slow circle.

### *Projection*

Sound is supported by the diaphragm. To produce sounds that are powerful and consistent, you must push the air out through the combined movement of your diaphragm and abdominal muscles, not from your throat, chest or lungs. This will give you proper breath support. To learn abdominal breathing, lie on the floor and place your hand on your diaphragm. Taking a small breath for each sound, say "ha, ha, ha" over and over again. You should feel your diaphragm contracting with each "ha" but your shoulders should not move up and down. After you discover how this feels, practice abdominal breathing when you are sitting or standing.

Next, try this projection exercise: Let your tongue hang outside your mouth and say "la, la, la," until you are aware that the sound is projecting outside of your mouth. Then draw your tongue in as you continue to say "la, la, la." When your tongue is in this position, your voice will lack carrying power because you are swallowing your words. Practice speaking with your mouth wide open and your tongue in a forward position so that your words carry to the back of the room. And continually remind yourself to use your abdominal muscles, to make sure your breath supports your tone.

To coordinate breath support and projection, read a short story aloud three different ways: First, break the first few paragraphs into short phrases and, when you read the story, pause and take a breath between phrases. Next, recite the passage again, reading as many words as you can on one breath. Finally, read it in a normal manner, one logical idea or thought at a time, pausing between each thought.

### *Vocal Color*

Also, consider your expressiveness. Is your reading voice flat? Does it sound spiritless? Or do the words and images in a story or magazine article come alive when you read it? If you can't suggest the emotions portrayed in a story—or the excitement of the author of a report on industry breakthroughs—by the tone of your voice, exaggerate your expression. If an article tells about an exciting discovery in your field, read it as if you've just heard that you won the lottery.

Next, vary your pitch as you read the piece. Your vocal cords (inch-long muscles in your larynx) expand and contract much like a rubber band when you raise and lower your voice. It's this raising or lowering, commonly referred to as inflection, that adds "color" or variety to your voice. Begin reading a passage or several paragraphs in a whisper, then gradually increase your volume until you are speaking loudly and sound excited, then gradually lower your voice until you are whispering again. Frequently practicing going from low to high to low again will increase your vocal range.

### *Work Out Your Mouth*

After you've gotten the basic machinery in gear, it's time to work out the muscles of your mouth. Play back your tape. Do you mumble or slur certain consonants or vowels? Do people say that they have difficulty understanding you or do they frequently ask you to repeat what you said? If so, try these exercises to improve your enunciation (the act of pronouncing or articulating words clearly).

Listen to yourself talking on tape to determine which sounds are your *bêtes noires*, and then drill yourself to correct problems. For instance, to correct poor consonant differentiation, repeat this sequence four or five times:

*Ba, bo, boo, ba, po, poo, po, ma, mo, moo, mo*

Then, vary the sequence (ba, pa, ma . . .) and repeat each variation four times. Tailor the exercise to your needs by substituting the consonant sounds that you have trouble enunciating for the "b," "p" and "m" in the example.

Practicing the consonant groups that you mispronounce will train your mouth to differentiate between sounds that are produced in a similar manner but sound different, unless you have "lazy mouth." For instance, if you tend to pronounce "try" as "twy," you can drill: tra, tro, troo, tro—or tra, tre, tri, tro, tru, adding the vowels "a, e, i, o and u" to the consonant combination.

Practice the consonant groups below in this fashion; they are grouped together because your tongue, lips and soft palate shape the sounds in a similar way.

*b, p, m, v (see the example given above)*  
*f, v (fa, fo, foo . . . va, vo, voo, etc.)*  
*d, t*  
*l, m, n*  
*s, z*  
*t, z, j*  
*c, g, h, k*  
*r, j, y*

And don't forget to drill sounds such as the "ch" sound in "child" and the "th" sounds of "this, think, through."

You can work on vowel sounds in a similar way. However, bear in mind that it's the different ways people pronounce vowels that usually distinguishes regional accents. A Bostonian makes a long, drawn out "ah" sound for "a," such as in "Hahvahd"—the same sound a Southerner makes when pronouncing the "y" in "my" as "mah."

If you want to change your vowel sounds, here are a few simple drills:

*at, bate, bath, barley*  
*red, reed, dearth*  
*ripple, ripe*  
*doll, dole, for, woman*  
*fuss, tune, muse*

Most good dictionaries have lists of the most common sounds of the English language, keyed to their phonetic pronunciations, with examples of each sound. You can use these lists for drilling or get a book on public speaking that contains exercises for various enunciation problems. (However, if you want to eliminate an accent or correct a serious vocal handicap, you should get professional help. Contact the National Association of Hearing and Speech Action at 800-638-TALK and ask for a list of qualified speech/language pathologists in your area.)

The way you sound contributes as much to your professional image as the way you dress. Do yourself a favor: Outfit yourself with a confident, authoritative "power voice." It won't cost you a cent, and it will continue to impress people long after your most expensive suit has gone the way of all threads.

—J. Randall

—Reprinted with permission from The Executive Female, the bimonthly publication of the National Association of Female Executives, 127 West 24st, N.Y., NY 10011, (212) 645-0770.



## IEEE: The Benefits of Membership

Micromouse Competitions, McNaughton Centers, Career Seminars, S-PACS—all this and more awaits you as an IEEE student member. Now that you are a member, it is crucial that you avail yourself of the many IEEE opportunities to solidify your personal and professional future.

Have you discovered your Student Branch? Many colleges have IEEE student branches; and if yours does, you are automatically a member. Members participate in many activities ranging from field trips to career information seminars. Sometimes, they design projects for certain contests, like the annual IEEE Micromouse Competition. This competition requires each group to design a "mouse" (really a micro-processor) that must navigate its way through a labyrinth. In Canada, many branches have opened McNaughton Learning Resource Centers, where students can work on such diverse engineering projects as satellite tracking, microprocessor study, and personal ham radio projects.

Student branches may also plan S-PACS, Student Professional Awareness Conferences, where members investigate nontechnical issues that effect engineers' careers like human relations, ethics, interviewing, and communication skills. In this era, it is important that the engineer be self confident in order to perform effectively on the job. These S-PACS permit students to re-examine their goals, needs and skills and thus help create a more confident and successful person.

You can gain important professional exposure outside of the student branches at regional and international IEEE conferences. As a student member, you are eligible for reduced rates to these functions, where you will find exhibits, workshops, seminars and great exchanges of ideas with other members and experts.

Students with particular technical interests can also join IEEE societies, which are grouped by particular interest fields. Participating in a society allows a student member to meet IEEE members in a particular field who can give them insight from their experience. Student branch chapters are composed of students at a school belonging to the same society who wish to plan their own activities.

Did you know that as an IEEE member you gain access to the Engineering Societies Library, which happens to be one of the largest engineering libraries? It will loan books to you for a fee.

The IEEE offers many publications from which students can benefit. Every month, student members receive *Spectrum*, the award-winning magazine that features articles on both the technical and non-technical aspects of engineering. *The Institute*, a newspaper that tells of the IEEE's latest events, also is sent to members monthly. In addition, you will receive *Potentials*, the IEEE's magazine especially for student members, complete with technical, career-oriented, and educational articles.

*The Proceedings*, a journal of pertinent scientific papers, is available to IEEE members through subscription. Through IEEE publications, you can order selected reprints and electrical and electronics publications and thus remain up-to-date on the latest happenings in your field.

Perhaps you have written a paper on a topic of interest to engineers. There are many competitions awarding cash and recognition for excellent works. Top regional papers are published annually in the *IEEE Student Papers*.

Did you know that as a student member, you are eligible for scholarships, fellowships, and other awards? With the high cost of education today, you can reap the rewards of being a student member.

And when it is time for you to make the transition from college student to graduate, the IEEE is there, offering information and benefits. In *Spectrum* and *Potentials*, you will discover opportunities for graduate study and occupational possibilities. If you have been an active student member, whether in a society, a branch, or in some other manner, you may have learned of other opportunities. The skills and information you have acquired from your involvement in IEEE student activities will stand you in good stead as you build your career. And the IEEE gives graduating students a break by substantially reducing their dues for the first year after graduation.

Clearly, membership in the IEEE will give you professional exposure, increased technical knowledge, and personal growth. The fast-paced society in which we live demands an up-to-the-minute knowledge of technological changes by competent, confident individuals, an accessible goal through IEEE membership. So get your money's worth from your dues—become an active IEEE Student Member!

—Sheryl Stein, Assistant Editor, *Potentials*,  
February '88



# Tools of the Trade

## Secrets of the Great Communicators Part 2: Finding the Gold



*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.*

Some years ago, I listened to a talk by a man called Danilo Dolci. He was one of those heroes who "take arms against a sea of troubles, and by opposing" . . . at least oppose them, at least take a human stand. Danilo Dolci led small bands of citizens in Sicily in open protests against the Mafia. Ghandi-like, he marched ahead of the townspeople and taught them to reject fear. He came to Columbia University to talk about his activities, and I went to hear him.

He was electric. We were all on the edges of our seats, marveling at this courage, enlivened by the light in his eyes. After the talk, I joined the line to shake his hand. When I finally reached him, I told him how wonderful I thought he was, how I admired his dedication, fearlessness, and energy.

Signor Dolci turned his shining gaze on me and gave me his full attention, as if I were the only other person in that full-to-bursting auditorium. He said we all had those qualities—or something to that effect. I do not recall his exact words.

What I do remember, and always will remember, is the way he looked at me as if I were someone who could do anything I wanted—anything at all. He seemed to see nothing but good in me, although he knew nothing about me and spent probably a total of two minutes with me. When I said goodbye, I felt empowered—that really is the word—to do anything worthwhile that I wanted to do. He saw a golden person in me who I didn't know was there, and he made me believe that person was my real self. Other people who had talked to him described his effort on them in similar terms.

Danilo Dolci saw the golden person in each of us—and we actually believed ourselves to be what he saw: a little better, a little stronger, a little more worthy than we had thought we were before we met him. Danilo Dolci was a "Great Communicator." He changed the people he met.

### *The Golden Secret*

Today, if I am feeling defeated or overwhelmed, I can recall vividly the way he looked at me as someone who, just by being human, had limitless potential and resurgent strength. Those two minutes have multiplied into hundreds of hours of hope, energy, and work as I remember his confidence in me and decide that, yes, I can do it, no matter what.

Since meeting Dolci, I have come across one or two people who knew the golden secret. One was a successful businessman, an agent for a book I was writing. The deadline for the book was impossibly tight; with my other commitments, there was no way I could finish it in the time specified. I told him so. He smiled and said to me, "But I know you'll be able to do it. You're like me—you make things happen." I finished that book on time.

The great communicator with the golden secret believes strongly in himself (herself), his work, and his ability to do whatever is required of him. He seems to draw this belief from the mere fact that he is a human being. He does not think he's unique; rather, he believes he can do great things because of certain human qualities that we all share. He has merely had the good sense or good fortune to recognize and use them.

Therefore, he sees these qualities—great reserves of strength, creativity, energy, and brainpower—in other human beings. He knows, perhaps only intuitively, that the way to activate these golden qualities is to concentrate on them and speak to them. So, he looks at them in you, and in so doing, he makes you aware of them in yourself.

When I have tried to apply Dolci's golden secret, the results have been consistently astounding. I become aware of abilities and energy I didn't think I had, and I use them. I feel good about each person with whom I'm talking. I don't see him as a barrier to something I want or a mass of potential objections to my ideas. Rather, I start to see him as someone full of interesting thoughts of his own. I listen more. I look forward to spending some time with this person, or working with him.



Of course, what we say or do depends on the situation, but I can tell you that when I look through the words and actions and roles to see the golden person inside, the person I'm talking to seems to begin to shine. Our time together is vibrant, positive, and often productive. We may not be fighting for freedom together, but our lives and work become more appealing, and we feel like giving more of ourselves.

Try to see the golden person in yourself and others. When you are with someone, believe that one shining human being is talking to another. See what happens, to both of you.

*Cheryl Reimold*



## 1989 Conference in New York Follows a Tough Act

The Seattle conference in October attracted about 175, more than any previous conference. The people, the program, the facilities were all first class. "It will be a hard act to follow," according to the PCS's Ad-Com.

You, IEEE-PCS members, made the 1988 conference so successful. And you can contribute to an encore performance on the East Coast at the 1989 International Professional Communications Conference in New York, the communications center for the world, October 18-20, 1989.

New York, as an international center for communication, offers an ideal setting to underscore the conference theme: "Communicating to the World." It is a city alive with technological, cultural, scientific, political, and financial activity. Literally every nation, corporation, and institution has a presence here. Communications trends begin in New York.

### *Abstracts for Papers*

The three-day conference will focus on topics related to the conference theme, and on other issues of concern to technical professionals, such as local networks, system security, an electronic bulletin boards.

The Call for Papers has gone out for: original papers, complete sessions devoted to a single issue, panel discussions, tutorials, demonstrations, and workshops.

The list of topics includes:

International Communications Systems  
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Aids for Speech and Vision  
  
Bulletin Boards Systems  
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Impact on Networks on Communication Patterns  
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### *Participate as Part of the Program*

To present a paper, lead a workshop, be a session moderator, propose a session, or take part in a panel discussion, write a 300-500 word summary of your idea. Send it by January 15 to:

Dr. Robert Krull & Dr. Philip Rubens  
Department of Language, Literature, and  
Communication  
Rensselaer Polytechnic Institute  
Troy, NY 12180  
(518) 276-8260; 276-8123

For General IPCC '89 Information, contact:

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Yes, I am interested in the 1989 IEEE/PES Conference and Exposition April 2-7, 1989 in the New Orleans Convention and Exposition Center. Please send me:

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## Guide Specifications Recommended for Preparers of Government Solicitations

Proposal Preparation Instructions (PPIs) or Instructions to Offerors (ITOs) are issued with most government or military solicitations. They set publication specifications that are intended to produce proposals that are easier for government representatives to review and evaluate.

Unfortunately, many of the specifications are incomplete, contradictory, and confusing. This causes many problems for the bidders who prepare proposals and, in turn, makes it difficult for the reviewers.

In an article scheduled for publication in the March 1989 *Transactions* of the IEEE Professional Communication Society, we discuss the problems caused by poor publication specifications. The article is entitled "Suggestions for Those Who Write Instructions for the Preparation of Government Proposals," or, "Why Do You Make It So Hard For Us to Make It Easy for You?"

The article includes a set of recommended Guide Specifications (see Exhibit 1). They include and integrate all of the elements and instructions necessary for producing proposals that can be read and evaluated efficiently, taking into account most of the problems that have been caused in the past by inadequate specifications.

### Exhibit 1: Guide Specifications Recommended For Writing Government Proposal Preparation Instructions and Instructions to Offerors

**Note:** Items in **Bold** may be changed without compromising the integrity or effectiveness of these specifications. Other changes are not recommended.

The proposal shall consist of four separately bound volumes with page count limitations number of copies to be delivered shown below.

<i>Volume No.</i>	<i>Title</i>	<i>Page Limit</i>	<i>No. Copies</i>
<b>Volume I.</b>	<b>Executive Summary</b>	<b>20</b>	<b>5</b>
<b>Volume II.</b>	<b>Management Volume</b>	<b>100</b>	<b>5</b>
<b>Volume III.</b>	<b>Technical Volume</b>	<b>200</b>	<b>5</b>
<b>Volume IV.</b>	<b>Cost Volume</b>	<b>None</b>	<b>5 plus unbound original</b>
<b>(Other volumes may be added)</b>			

The following front mater shall be provided for each volume:

Cover  
Title Page  
Table Contents  
List of Figures and Tables  
Glossary or List of Terms  
Compliance and/or Cross Reference Matrix

Front matter will not be included in the page count.

The text shall be typed, typeset, or printed on 8½"×11" paper with margins of at least 1" on all sides, excluding running headers or footers, classification or proprietary markings, and section or page numbers. Each page shall contain not more than 54 lines of text or equivalent space, and the average line of text shall contain not more than 100 characters. Proper attention should be given to legibility of the main body type, the vertical size of capital letters being not less than ⅜". Type that is very condensed, light-faced, italic, or script should be used only sparingly for special purposes. Multiple columns may be used, in which case the left and right page margins may be ¾". Special features (e.g., headings, highlighting, bullets, tabs) that will increase the readability and usability of the volumes are encouraged.

Pages may be printed on one or both sides. Only pages containing type or illustrations will be page numbered and counted. Up to 25% of the total number of pages in any volume may be 11"×17" foldouts. Each printed side of a foldout will count as one page; however, if half of a foldout is printed as text, the foldout will be counted as two pages. Bidders shall devise numbering schemes of sections, pages, figures, etc.

Questions concerning these specifications may be telephoned at any time to **Insert Name** at **Insert Phone Number**.

The Guide Specifications have been reviewed by a large number of proposal experts and have been approved by the IEEE-PCS Committee on Proposal Standards. We suggest that anyone dealing with proposals copy the Guide Specifications, distribute them to interested parties, and encourage their use. If they are used, both industry and government can avoid much confusion, inefficiency, and frustration; and they should be able to save millions of dollars.

—James W. Hill and Jerome K. Clausen,  
State College, PA



## PCS Officers For 1989

AdCom elections at the annual election meeting, held on October 7, 1988, were preceded by a considerable discussion regarding the roles and responsibilities of AdCom members. The consensus of the discussion was that an AdCom member should be willing and able to attend at least two AdCom meetings a year to conduct the business of the society. As a result of this discussion, and based upon general recommendations of the Nominations committee, the following six individuals were elected to AdCom terms expiring in 1991:

- Gary Greenup
- James Hill
- David McKown
- Joan G. Nagle
- Richard M. Robinson
- Kimberly Manthy

In addition, also based upon a recommendation of the nominating committee, PCS President Jim Hill appointed

- Michael B. Goodman

to fill the AdCom vacancy (expiring 1990) caused by the resignation of Sal DeAmicis.

Following these elections, Jim Hill and Rudy Joenk were unanimously elected to second terms as President and Vice President, respectively. Jim announced that he planned to ask most other officers and committee chairmen to continue in the same capacity for 1989.

Brief biographies of new AdCom members (Gary Greenup, Kimberly Manthy, and Mike Goodman) will be included in an upcoming issue of the *Newsletter*.



## USAB News

*IEEE-USAB Supports Changes in Recently-Enacted Tax Laws Affecting Tax Status of Consulting Engineers/Computer Specialists, Credits for R&D, and Educational Assistance.* In July, the House Ways and Means Committee approved a bill making changes in recently-enacted tax laws and adding provisions affecting the tax status of consulting engineers and computer specialists, research and development, and educational assistance. IEEE-USAB is joining other Washington-based groups to support these changes which have recently been referred to the Senate Finance Committee.

House Ways and Means has agreed to include a provision calling on the Treasury Department to conduct a study of the effects of Section 1706 of *The Tax Reform Act* on independent contractors who provide services through third parties. Ways & Means has also agreed to extend the current R&D development tax credit through December 31, 1990. And it would restore the exclusion from taxable income for employer-provided educational assistance through December 31, 1990.

*IEEE-USAB Representatives Visit Hill to Express Support for Moratorium on Reversions of Excess Assets From Overfunded, Defined Benefit Plans.* On July 14, IEEE-USAB joined representatives of the American Association of Retired Persons (AARP), the National Council of Senior Citizens, and the Pension Rights Center to support pending House and Senate legislation that would impose a moratorium on the reversion of excess assets from overfunded, defined benefit plans. IEEE-USAB has previously expressed its support for a moratorium on reversions in letters to the Senate Appropriations Committee as well as to the entire Senate. The Capitol Hill visits to the offices of Senator Howard Metzenbaum (D-OH), Senator Bob Packwood (R-OR), and Representative Claude Pepper (D-FL) were videotaped by an NBC News camera crew preparing footage for its White Paper on "The Pension Cookie Jar," which aired August 2.

*IEEE Committee on Communications and Information Policy Releases Three Reports.* The Scientific Supercomputer Subcommittee of the IEEE Committee on Communications and Information Policy, a joint committee of the IEEE Technical and United States Activities Boards, has recently issued three reports: "U.S. Supercomputer Vulnerability"; "The Computer Spectrum: A Perspective on the Evolution of Computing"; and "Software for Supercomputers: A Report." All three are available to media on request to

IEEE Public Relations in Washington, telephone (202) 785-0017.

*Two IEEE-USAB Congressional Fellows Named for 1989; Two Completing Terms With Personal Staffs of Senator Domenici, Representative Brown.* Two IEEE-USAB Congressional Fellows have been selected for 1989: Dr. Charles W. Bostian, Clayton Ayre Professor of Electrical Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA; and Denis J. King, Business Development Representative, Bechtel Eastern Power Co., Gaithersburg, MD.

In addition, two 1989 IEEE-USAB Congressional Fellows are completing their terms on the personal staffs of Senator Pete Domenici (R-NM) and Representative George Brown (D-CA). Dr. James Gover, Supervisor, Radiation Effects, Microelectronics Division, Sandia National Laboratories, Albuquerque, NM, has assumed broad-based responsibility for technology issues with Senator Domenici. And Clark Johnson, Consultant, Denver, CO, has worked with the House Science, Space, and Technology Committee on issues relating to competitiveness and R&D funding.

*Two IEEE Student Members Complete Washington Internship for Students of Engineering (WISE) Program.* Two IEEE Student Members, Lisa Shay of West Point Academy and Elizabeth Abrahams of Bucknell University are completing summer programs in the Washington Internship for Students of Engineering (WISE) program, supported by IEEE's Technical and United States Activities Boards. Ms. Shay is completing work on the regulation of sensitive but unclassified information; Ms. Abrahams is writing about Federal regulation of medical devices.

*IEEE-USAB Adds Graduating Engineers Employment Registry (GEER) to PEER/SEER Family of Employment Databank Services.* Beginning this fall, IEEE Student Members will have access to the Graduating Engineers Employment Registry (GEER), a non-confidential employment databank service. After graduation, remaining GEER entrants will be advised that they can use an alternate IEEE-USAB service, the Professional Engineering Employment Registry (PEER).

GEER is the latest addition to the IEEE-USAB family of employment databank services following the introduction of PEER in 1984 and the Self-Employed Engineers Registry (SEER) in 1987. PEER, SEER, and GEER are all operated under contract with Career Technologies Corp. (CTC). Registration blanks are available from CTC, 138 Old River Road, Andover, MA 01810, telephone (617) 683-0098.

*IEEE-USAB to Present Award for "Distinguished Contributions to Engineering Professionalism," "Citations of Honor."* At its meeting July 15-16 in Montreal, USAB voted to present its Award for Distinguished Contributions to Engineering Professionalism to Dr. John M. Richardson, Chairman of IEEE's Committee on Computers and Information Policy, and Director, Board on Telecommunications and Computer Applications, National Academy of Sciences. USAB cited Dr. Richardson "for dynamic leadership in stimulating timely responses to public issues of computer and telecommunications policy involving computer information security, drastic changes in the U.S. telecommunications network, competitiveness in U.S. semiconductor trade, and for notable efforts in developing construction support for passage of the Computer Security Act of 1987."

In addition, USAB voted to present Citations of Honor to Dr. Lawrence P. Grayson and Roger M. Biosjoly. USAB cited Dr. Grayson "for extensive and tireless efforts in publicizing the urgent need to improve the quality of mathematics and science teaching in the U.S. and for leadership in developing useful materials for stimulating action in this cause."

USAB cited Mr. Biosjoly "for exemplary efforts in upholding his professional responsibilities as an engineer in alerting others to the life-threatening design problems on the Challenger Space Shuttle by strongly recommending against the tragic launch in January 1986, and for his continuing campaign to publicize the ethical responsibilities of engineers."

*IEEE Joins Sponsors of National Engineers Week 1989.* IEEE has joined eight other sponsors of National Engineers Week 1989 scheduled February 19-25. Engineers Week has the theme of "Turning Ideas Into Reality," and is expected to focus on the future of engineering.

*"IEEE Technical Activities Guide," "IEEE Standards Bearer" Available to Media on Request.* A quarterly publication that lists IEEE's nearly 300 major conferences, the IEEE Technical Activities Guide (TAG), and a quarterly summary of IEEE Standards activities, the IEEE Standards Bearer, can be obtained by media through IEEE Public Relations in New York, telephone (212) 705-7847; and in Washington, telephone (202) 785-0017.



# A Northwest Pioneer

## Special Achievement Award Presented to Professor James Souther

To emphasize its commitment to the development of professional technical communicators through education, the Professional Communications Society (PCS) conferred a special award at the 1988 International Professional Communications Conference (IPCC '88) in Seattle, Washington (October 5-7) on Prof. James Souther, the "patriarch" of professional technical communication in the Pacific Northwest. The award carried a one thousand dollar grant for the Program in Scientific and Technical Communication (STC) at the University of Washington, in Seattle.



The commemorative plaque, which reads "Lifetime Achievement Award: Awarded at the 1988 Professional Communication Conference, Seattle, WA, October 5-7, 1988 to Prof. James G. Souther, in recognition of your contributions as teacher and leader to the profession of technical communication," was presented to Prof. Souther during the conference banquet.

Prof. Souther has long been a leader in professional technical communication. The Puget Sound region is a center of aerospace manufacturing and electronics, and Prof. Souther has been influential in formulating the principles of professional technical communication in the area. In the early 1950s, Prof. Souther joined with several other faculty members to form a working group in technical communications at the University of Washington. Then, in 1971, he founded the Program in Scientific and Technical Communication (STC) in the College of Engineering at the University and became its director.

Prof. Souther's vigorous teaching style has earned him a reputation as a hard task-master but an inspiring instructor and a good friend to students. After retiring to 40 percent status as active professor emeritus, Prof. Souther has continued to bring his

wide-ranging experience to students as a teacher in the STC program.

In honoring Prof. Souther, the PCS realizes two objectives: it recognizes the achievements of a pioneer of professional technical communication in one of the far-flung centers of technical communication in the United States and it emphasizes the importance of educational programs in achieving the goals of the Society.



## 1989 Conference Calendar

*IEEE 1989 Aerospace Applications Conference*, February 5-10, Breckenridge, CO. Information: L. Mallette, Hughes Aircraft, MS: Bldg R-10, A9026, P.O. Box 92919, Los Angeles, CA 90009. Tel: (213) 334-2909.

*The Optical Fiber Communication Conference—OFC '89*, February 6-9, Houston, TX. Information: Optical Society of America, 1816 Jefferson Pl. NW, Washington, D.C. 20036. Tel: (202) 223-0920.

*Communication in Distributed Systems*, February 22-24, Stuttgart, Federal Republic of Germany. Information: Dr. -Ing. F. Coers, Secretariat, German Section of the IEEE, Stresemannallee 15, VDE-Haus, D-6000 Frankfurt 70. Tel: (+69) 6308-221.

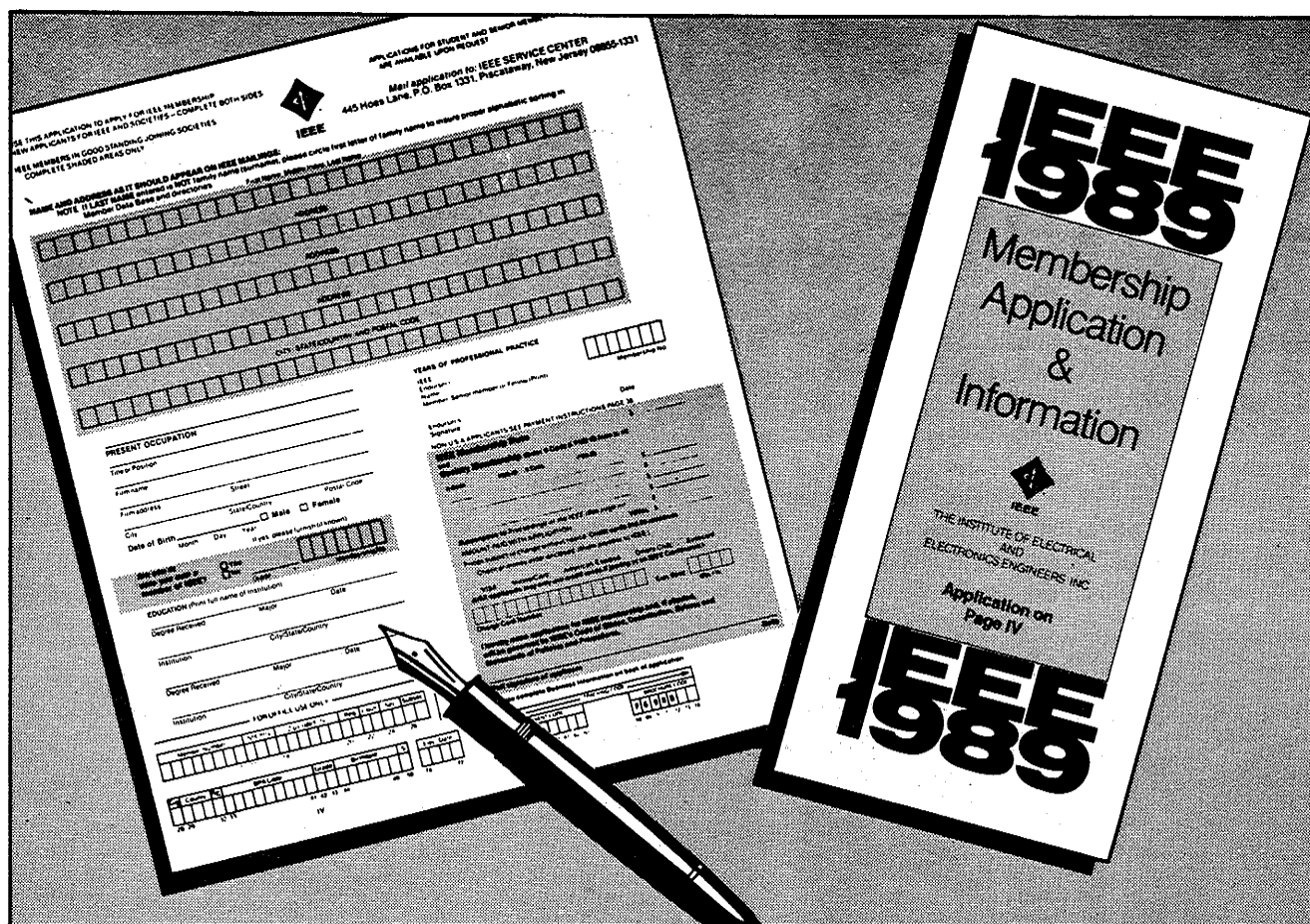
*Microelectronics*, March 13-15, Baden-Baden, Federal Republic of Germany. Information: Dr. -Ing. F. Coers, Secretariat, German Section of the IEEE, Stresemannallee 15, VDE-Haus, D-6000 Frankfurt 70. Tel: (+69) 6308-221.

*Phoenix Conference on Computers and Communications*, March 22-24, Scottsdale, AZ. Information: Dr. T. Regulinski, Loral Corp., P.O. Box 295, Goodyear, AZ 85338.

*Electronics and Electrical Engineering '89*, April 5-12, Hannover, West Germany. Information: Hannover Fairs USA Inc., 103 Carnegie Center, Princeton, NJ 08540. Tel: (609) 987-1202.

*National Computer Conference*, April 10-13, Chicago, IL. Information: AFIPS, 1899 Preston White Dr., Reston, VA 22091. Tel: (703) 620-8900.





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IEEE

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Announces the 17th Annual Competition for

**1989-1990****Congressional Fellowships****A CONGRESSIONAL INTERNSHIP  
FOR MEMBERS OF IEEE**

**PROGRAM:** Electrical and Electronics Engineers and Allied Scientists are competitively selected to serve a one-year term on the personal staff of individual Senators or Representatives or on the professional staff of Congressional Committees. The program includes an orientation session with other Science-Engineering Fellows sponsored by the American Association for the Advancement of Science (AAAS).

**PURPOSE:** To make practical contributions to more effective use of scientific and technical knowledge in government, to educate the scientific communities regarding the public policy process, and to broaden the perspective of both the scientific and governmental communities regarding the value of such science-government interaction.

**CRITERIA:** Fellows shall be selected based on technical competence, on ability to serve in a public environment and on evidence of service to the Institute and the profession. Specifically *excluded* as selection criteria shall be age, sex, creed, race, ethnic background, and partisan political affiliations. However, the Fellow must be a U.S. citizen at the time of selection and must have been in the IEEE at Member grade or higher for at least four years. Additional criteria may be established by the selection committee.

**AWARDS:** IEEE plans to award two Congressional Fellowships for the 1989-1990 term. Additional funding sources may permit expansion of awards.

**APPLICATION:** Further information and application forms can be obtained by calling W. Thomas Suttle (202) 785-0017 at the IEEE Washington, D.C. Office or by writing:

Secretary, Congressional Fellows Program  
The Institute of Electrical and Electronics Engineers, Inc.  
1111 Nineteenth St., N.W.  
Suite 608  
Washington, D.C. 20036

Applications must be postmarked no later than March 31, 1989 to be eligible for consideration.

# Letters to the Editor

## ... A Question of Interpretation

**"Indeed, nothing so neatly reflects the company's present situation as its latest and arguably its second greatest innovation: a flat shadow mask for a flat-faced cathode ray tube hailed everywhere as a major breakthrough."**

The enclosed exchange of letters between *Spectrum* and me on using the word "arguably" is submitted for your readers' scrutiny.

My letter expressed my confusion over the two conflicting meanings of that word. *Spectrum's* reply compounds the confusion by admitting that the word was deliberately chosen to convey both meanings.

I'd be interested in hearing what PCS members have to say about such equivocation.

—Leslie R. Axelrod

To the *IEEE Spectrum*:

August 8, 1988

I'm puzzled by Tekla Perry's use the word "arguably" in describing Zenith Electronics Corporation's flat shadow mask (August 1988, page 16).

He says, "Nothing neatly reflects the company's present situation as its latest and *arguably* its second greatest innovation. . . ." [Emphasis added.]

It seems to me that *arguably* is an unfortunate word to choose, since it can mean either "provable by logical argument" or "open to dispute."

Does Perry mean that the flat shadow mask really is Zenith's second greatest innovation? If so, why not use *unarguably*?

On the other hand, if he means that there is disagreement about the greatness of this invention, then why not use a suitable qualifying phrase?

I look forward to an unarguably authoritative recommendation from *SPECTRUM's* editorial gurus.

Reply To Mr. Axelrod:

August 18, 1988

I was responsible for the use of the word "arguably" in the description of Zenith's Flat Shadow Mask (*IEEE Spectrum*, August, p. 16), so your letter of the 8th as was passed to me.

It so happens that I meant "arguably" in both senses,\* in that the outcome of any logical argument depends on its premises. So if people agreed on their premises, they would agree on the conclusion, but if not, they would disagree.

But thank you for reading us with such close attention.

—Margaret Eastman

\*"provable by logical argument" and "open to dispute"



# Newsletter

IEEE Professional Communication Society