TELLING TALES FROM THE BOTTOM UP: COMMUNICATION AT THE SOUTH POLE

BY JOHN BIRD AND JAMIE HUTCHINSON

English explorer Robert Falcon Scott became the first recipient of a written communication from the South Pole on 18 January 1912, the same day he became the *second* man to reach the celebrated goal of 90 degrees south latitude. A note had been left for him by his longtime Norwegian rival Roald Amundsen who, unknown to Scott, had won the race to the Pole a month earlier. The note was businesslike, polite: Amundsen offered Scott the use of any articles from the abandoned camp, wished him a safe return, and requested that he forward a certain letter to the king of Norway.

In other words: *Loser!*

Injury would be added to insult. During March, in the course of their return from the Pole, Scott's party encountered an early winter storm that trapped them in their tent only 11 miles from a supply depot that would have saved their lives. By that time Amundsen had made it to Tasmania and had cabled the news of his triumph to the rest of the world. It was not until the following November (Antarctic spring) that a search party would find the bodies of Scott and his companions, along with Scott's papers, in which he wrote, "These rough notes and our dead bodies must tell the tale…."

Today, workers at the equitably named Amundsen-Scott South Pole Station can tell their tales using the far less gruesome media of the information age. During the winter months when planes cannot land at the Pole, satellites provide a vital link to the outside world for "Polies." Two years ago, staff doctor Jerri Nielsen was able to consult with U.S. doctors who diagnosed her breast cancer and oversaw chemotherapy treatments until her evacuation from the Pole in October 1999. This year, doctors in Denver used video to diagnose the gall stones of South Pole doctor Ronald Schemenski, who was evacuated at the last possible moment before the onset of Antarctic winter.

Compare these well-publicized stories to that of Scott's companion Titus Oates. During the ill-fated retreat of the Scott party from the Pole, Oates realized that his frostbitten feet were overcome with gangrene. According to Scott's journal, Oates went out into a raging blizzard one day, saying, "I am just going outside and may be some time," and he never returned.

While communication and its associated benefits have come a long way at the South Pole, the Amundsen-Scott station remains a good deal more isolated than your typical branch office. For the enlightenment of *Newsletter* readers, the authors offer the following survey of communication at the Pole. Our credentials: Hutchinson is an engineering publications editor and PCS member (that's the *communication* part); Bird is an atmospheric scientist currently based at Amundsen-Scott (that's the *Pole* part).

Wired, But Wirelessly: External Communication

Satellites and electronic communication systems increasingly "wire" the Pole to the rest of the world. Teleconferencing became available this year, complementing IP (Internet protocol) phones and Iridium phones (yes, they still exist—the Pentagon uses them for global communications and

FROM THE EDITOR

RUDY JOENK

AdCom

Following president Hayhoe's summary (p. 3) of the IEEE's fiscal woes are two more upbeat accounts of PCS actions. On p. 5 is the announcement of a new technical communication education award in honor of Ron Blicq, and on p. 6 is (blush, blush) the renaming of the best paper award after me.

Our Web site (*http://www.ieeepcs.org/*) had more than 4000 visitors during June. After the home page, IPCC 01 and publications were the most popular destinations.

The next AdCom meeting will be in two parts on 24 and 27 October at La Fonda in Santa Fe along with IPCC 01. PCS members will be welcome at this meeting, which is the annual election meeting. The schedule for 2002 has not been determined.

If you're interested in serving on the AdCom, communicate immediately with Kim Campbell, *k.s.campbell@ieee.org*. See the notice in the July/August *Newsletter*, p. 5.

Last Call for Instant Fame

If you're going to attend IPCC 01 in Santa Fe, New Mexico, 24-26 October, I'd like to offer you temporary appointment as a reporter (or photographer) for the *Newsletter*. Usually a paragraph or two about each presentation in a session—what was said, not what's in the proceedings—is appropriate. E-mail me at *r.joenk@ieee.org* if you're interested.

Potpourri

The system that lets cell phone users send and receive text messages seems to have been the impetus for adding an appendix on shorthand notation (as also used in e-mail) to the latest revised *Concise Oxford Dictionary: http://www.askoxford.com/betterwriting/emoticons/?view=.*

Said to be under consideration for inclusion in the fifth edition of *Webster's New World College Dictionary: mouse potato, n.* variant of couch potato; describes a chronic Web surfer. *San Antonio Express-News.*

Political correctness: *content provider = writer.* John Leo, Universal Press.

The Internet philosophy: "I type, therefore I spam." *Warped* by Mike Cavna.

Unisys Corp. "apologized" for "reducing life and everything in it to a series of acronyms" as a consequence of introducing the UNIVAC I in 1951. Gregg Moss and Elizabeth Narvaes, *The Denver Post.*

Mark Twain's challenge *(Newsletter*, May/June 2001 issue, p. 7) was accepted by more than 700 people. Three winners will be selected in October. Twain's previously unpublished story, "A Murder, a Mystery, and a Marriage," is in the *Atlantic Monthly*, July/August 2001 issue, pp. 54-64.

Information for Authors

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

If you use a wp program, **keep your formatting simple;** multiple fonts and sizes, customized paragraphing and line spacing, personalized styles, etc. have to be filtered

PRESIDENT'S COLUMN

CHALLENGES FOR THE FUTURE: INSTITUTE FINANCES AND THEIR IMPACT ON PCS

GEORGE HAYHOE

IT infrastructure will increase future revenue to societies and councils.

The IEEE societies and councils have been concerned about the Institute's fiscal health for several years. The reason for this concern is that Institute-level reserves have significantly declined over the past five years for a number of reasons.

1. Dues income has decreased because student dues were reduced in 1998, higher grade member dues have not increased since 1996, and the number of subsidized (student, recent graduate, life, retiree, minimum income, and unemployed) members has risen.

2. Several years ago the Institute changed the way that income from its intellectual property was distributed. Because the overwhelming majority of that intellectual property (articles in periodicals, conference proceedings, and books) is generated by entities within the IEEE such as societies, it was felt that a greater share of the income it produced should go to those entities rather than to Institute-level reserves. As a result, many societies—including PCS—have experienced enormous growth in their reserves.

3. The Institute needed to make improvements to its information technology (IT) infrastructure to position itself for the future. Upgrading headquarters hardware and software, addressing the Y2K problem, and implementing needed e-business capabilities (IEEE *Xplore*™, Web-based membership application and renewals, and so forth) required significant investment, most of which was charged against Institute-level reserves.

4. Investment income has been significantly below forecast levels during the past two years because of downturns in the stock market, thus making matters worse.

Bad News for Fiscal Year 2000

Planned deficits in FY 2000 not only consumed what was left of the Institute-level reserves but also resulted in a large additional shortfall. As a result, society and council reserves were taxed USD 13.7 million to make up that shortfall. The share assessed to PCS (based on our percentage of overall Technical Activities Board reserves) was USD 20.8k.

I'm not saying that the money was badly spent. As a result of this spending, the Institute now has a world-class IT infrastructure that will increase future revenue to societies and councils. Because sales of electronic products such as IEEE *Xplore* are forecast to eventually exceed sales of print publications, we need to be able to deliver those products over the Web; gaining that capability required significant capital investment. And it's only fair that each IEEE entity pay its share of those and other overhead costs that had been paid out of Institute-level reserves before they were exhausted.

On the other hand, from the perspective of the Technical Activities Board (TAB, which consists primarily of society and council presidents), the IEEE board of directors didn't do a very good job of explaining that the investments planned in the FY 2000 budget would need to be funded by taxes on society and council reserves.

In fact, all assets of IEEE entities, including society and council reserves, belong to the IEEE and are ultimately controlled by its board of directors. But it would have made a lot more sense for the board of directors to get TAB's support in advance by explaining why the investment of our reserves was necessary, what the charges against our reserves would likely be, and how those investments would increase future income. Instead of knowing the costs before the fact, the societies and councils didn't have a forecast of the depletion of their reserves for FY 2000 until November 2000 and didn't know the final cost until June 2001.

Worse News for Fiscal Year 2001

The bad news is that the IEEE deficit will be worse in 2001 than it was in 2000; the

good news is that at least we have a pretty good idea what the cost will be to the societies and councils. Right now it looks as though the Institute will run a deficit of USD 18.5 million this year. As in previous years, much of this deficit represents investment in the IEEE's future but, once again, the societies and councils weren't told up front what the cost would be to their bottom lines before the Institute budget was adopted.

According to the formula that the IEEE devised for allocating the current year's deficit, each society's reserves at the end of December 2001 will be reduced by 14 percent minus the return on investments for the year. This means that if the market returns one percent (the rate of return on IEEE investments at the end of May 2001) for the year, PCS will lose 13 percent of its reserves (USD 21.2k).

Obviously, this massive hemorrhaging of reserves cannot continue indefinitely. TAB has been unhappy about the large deficits built into IEEE budgets for several years, and the message seems to have finally gotten through to the board of directors. The board's executive committee decided in March 2001 that the IEEE would adopt a net-zero budget for FY 2002.

Better News for Fiscal Year 2002 and Beyond

To make the 2002 net-zero budget possible, all entities were requested to increase income or reduce expenses to help make up the shortfall. The societies and councils were asked to amend their preliminary FY 2002 budgets to increase revenues and decrease expenses by a net of USD 6.9 million. In response, PCS increased its net for 2002 by USD 17.3k.

In addition, however, the IEEE must recover currently unallocated overhead. To recover each society's and council's share of that unallocated overhead, reserves at

Over three years PCS reserves will be taxed USD 49k, almost 27 percent.

the end of 2002 will be reduced by six percent minus the return on investments for the year. This means that if the market next year returns one percent for the year, PCS will lose five percent of its investment reserves (approximately USD 7k). This is a far smaller reduction of reserves than in 2000 or 2001. Still, the tax on PCS reserves over these three years will total USD 49k, almost 27 percent of the reserves we held at the end of 2000 before these taxes were levied.

To encourage fiscal responsibility in the future, TAB has requested that the IEEE board of directors require that candidates' statements for board positions include their views on fiscal policy, beginning with next year's election. This will allow members to determine whether candidates commit to fiscally prudent practices such as refusing to approve deficit budgets except under extraordinary circumstances.

In addition, TAB has embarked on a program of simplifying business rules across all societies and councils that should yield significant savings. For example, at its June meeting, TAB agreed to offer all society members access on IEEE *Xplore* to all back issues of periodicals to which they currently subscribe. This change does not affect PCS members, who already had that access, but it eliminates the need for expensive programming to accommodate access rules that varied from one society to another and sometimes from one periodical to another.

One thing is certain. Everyone in the IEEE must realize that fiscal responsibility is the only prudent course. We must invest in our future; we must allocate costs fairly; but we must live within our corporate means. I hope that when you evaluate candidates for regional and division directors, presidents, and vice presidents to serve on the IEEE board of directors, you will consider carefully their views on responsible budgeting and spending.

"In order to maintain a well balanced perspective, the person who has a dog to worship him should also have a cat to ignore him."

— Peterborough Examiner

AWARD FOR TECHNICAL COMMUNICATION EDUCATION CREATED

BY MURIEL ZIMMERMAN

The **Ronald S. Blicq Award for Distinction in Technical Communication Education** has been approved by the IEEE Awards and Recognition Committee. The Blicq Award will recognize innovative educators who have influenced the ways that technical communication is taught in pre-college settings, in undergraduate and graduate university degree programs, and in professional life through workshops and seminars.

Ronald S. Blicq

In naming the new award for Ron Blicq, the AdCom acknowledges his extraordinary impact on technical communication education at all levels. In courses offered through the IEEE and PCS as well as university programs and independent workshops, Ron has helped uncountable engineers improve their communication skills. Through his textbooks, videos, and workshops he has also taught several generations of technical communication faculty to design practical and motivating communication courses for technical students.

Ron has been a member of the IEEE and PCS since 1958 (then the Institute for Radio Engineers and the Professional Group on Engineering Writing and Speech). He has been developing and teaching courses for the IEEE and PCS since 1974. These have included correspondence courses, workshops for IEEE sections and chapters, and a multimedia independent study course. He served as PCS education chair 1974-92 and taught courses for the Popov Society in Moscow, Russia, and the Informatics Fund in Tallinn, Estonia.

Blicq's newest project is a Web-based course on professional communication techniques.

Since 1972 Ron has written eight textbooks on technical and business communication, one published by the IEEE Press and two written especially for Russian and Estonian engineers and scientists, translated into their languages. He has scripted and directed six dramatized educational video programs. In 1992 the Manitoba (Canada) Department of Education appointed him to help develop the curriculum for the grade 12 course in technical communication now offered in Manitoba high schools and then to teach high school teachers how to implement the new program.

Ron was a technical editor with the Royal Air Force in the U.K. and technical editor/training coordinator with CAE Industries in Canada. He joined Red River College in 1967 to develop its curriculum for teaching technical communication in the college's engineering technology programs. In 1990 Ron "retired" to form his own company and he has since taught communication skills to technical professionals in the U.S., Canada, and Europe. His newest project is a Web-based course on professional communication techniques (*http://www.rgilearning.com*).

Ron Blicq has been the recipient of four IEEE and PCS awards: the IEEE Centennial Medal in 1984, the PCS Alfred N. Goldsmith Award in 1986, the PCS Emily K. Schlesinger award in 1997, and the IEEE Millennium Medal in 2000. We are proud to honor his extraordinary influence on technical communication education through this new award.

The first Ronald S. Blicq Award for Distinction in Technical Communication Education will be announced and presented at the IPCC 01 awards banquet on 25 October.

Muriel Zimmerman is awards chair for PCS and a senior lecturer in technical communication at the University of California, Santa Barbara. She has long relied on Ron Blicq's textbooks for straightforward explanations and great examples and projects.

NEW CHAPTER IN HISTORY OF BEST PAPER AWARD

BY MURIEL ZIMMERMAN

The renaming of the PCS best paper award is now official. The IEEE Awards and Recognition Committee approved the AdCom proposal for the **Rudolph J. Joenk, Jr. Award for Best Paper in the** *IEEE Transactions on Professional Communication.*

Dr. Joenk served as editor of the *IEEE Transactions on Professional Communication* for eight years, beginning in 1977. In his term as editor he revived the publication from a dwindling two issues in 1976 to a reliable set of quarterly issues in 1984 that are still growing in size and strength. During his last two years as *Transactions* editor, Rudy also edited the PCS *Newsletter*, a task he assumed again at the end of 1997. Through his outstanding editorial work, he has established high standards for publications that are now central information resources in the field of engineering communication.

Rudy received the society's Alfred N. Goldsmith Award in 1980 for his work on the *Transactions* and the Emily K. Schlesinger Award in 1999 for distinguished service to PCS. (He was PCS vice president 1988-89 and president 1990-91, chaired the editorial advisory committee 1992-99, and served on the AdCom 1985-99.) He received the IEEE Millennium Medal in 2000. The AdCom is exceptionally proud to honor his accomplishments once more through renaming the best paper award.

This award recognizes an outstanding article published in the preceding year's *IEEE Transactions on Professional Communication*; the paper is selected by the editorial advisory committee. The award was proposed at an AdCom meeting 9 April 1975 by Charles A. Meyer, then chair of the awards committee and earlier (1965-66) president of the society.

The first best paper award was not given until 1981 because of the *Transactions* slump in the mid-1970s:

1981: "Tutorials for the First-Time Computer User" Janan Al-Awar, Alphonse Chapanis, and W. Randolph Ford (vol. 24, no. 1, pp. 30-37, March)

For reasons unknown, interest in the award then waned until the early 1990s. The EAC has since selected the following articles as best papers:

1994: "User Manuals as Project Management Tools: Part 1–Theoretical Background" and "User Manuals as Project Management Tools: Part 2–Practical Applications" by Rod McIntosh Shand, independent consultant (vol. 37, no. 2, pp. 75-80, June, and no. 3, pp. 123-142, September)

1995: "Cultural Adaptation and Information Design: Two Contrasting Views" by Charles Kostelnick, Iowa State University (vol. 38, no. 4, pp. 182-196, December)

1996: "Does the Manual Help? An Examination of the Problem-Solving Support Offered by Manuals" by Hans van der Meij, University of Twente (vol. 39, no. 3, pp. 146-156, September)

1997: "What Practitioners Need to Know to Evaluate Research" by Robert Krull, Rensselaer Polytechnic Institute (vol. 40, no. 3, pp. 168-181, September) *[tie with…]*

1997: "The Evaluation of Text Quality: Expert-focused and Reader-focused Methods Compared" by Leo Lentz, Utrecht University, and Menno de Jong, University of Twente (vol. 40, no. 3, pp. 224-234, September)

1998: "Learning to Write in Organizations: What Newcomers Learn about Writing on the Job (Part 1)" and "How Newcomers Learn to Write: Resources for Guiding Newcomers (Part 2)" by Susan M. Katz, North Carolina State University (vol. 41, no. 2, pp. 107-115, June, and no. 3, pp. 165-174, September)

1999: "Guidelines for Communication and Engineering Problem Solving at the Basic Level" by Michael A. Bridgwood, Clemson University (vol. 42, no. 3, pp. 156-165, September)

The award for 2000 will be announced and presented at IPCC 01 on 25 October.

Muriel Zimmerman is awards chair for PCS. She teaches technical and professional writing at the University of California, Santa Barbara, and she is coauthor (with J. Paradis) of The MIT Guide to Science and Engineering Communication *(MIT Press, 2nd edition in press).*

The first Joenk Award will be presented at IPCC 01.

COMMUNICATION AT THE SOUTH POLE

(continued from page 1)

Internal communication retains a military flavor, tempered by heavy doses of humor and frontier egalitarianism.

makes them available free for South Pole business). E-mail communication with family and friends is common, and Amundsen-Scott even maintains its own Web site at *http://www.spole.gov*.

The hitch in all of these communications is their dependence on line-of-sight access to satellites, four of which currently serve the Pole at bandwidths varying from 38 kilobits to 5 megabits per second. A satellite must be in view of both the Pole and a "distant end" ground station for communication to take place. This means that your ability to access *http://www.spole.gov*,

and the speed with which you are able to download the site, varies with the time of day, and likewise for e-mail. What's more, Amundsen-Scott communications staff sometimes must adjust the bandwidth of their systems to deal with technical issues. As of this writing, Marisat 2 had recently been downgraded to the bandwidth shown in the chart.

Nevertheless, the authors (who have never met in person) found the exchange of e-mail and attachments for writing this article to be very convenient. Coauthor Bird, more importantly, routinely exchanges data and carries on e-mail conversations with fellow scientists. After replacing a mirror on an aurora imager, Bird verified his handiwork by sending digital pictures of the equipment to an expert at the University of Illinois, where the principal investigator for his research projects is based.

Because the Pole is at the convergence of every time zone on earth, Polies can go by any and all zones. During summer, New Zealand time makes the most sense because of the continual stream of flights from coastal McMurdo station, which operates on New Zealand time. During winter, U.S. mountain time predominates for the convenience of bosses at Raytheon Polar Services in Denver. (Station operations are contracted to Raytheon by the National Science Foundation.)

Since the days of Amundsen, Scott, and other early adventurers, communicating from the South Pole has been not only a technical challenge, but also a public relations imperative. Journalists and VIPs visit during summer, and Polies must know how to convey the value of what they do, while avoiding their precious jargon (more about this later). During winter, journalists can interview Polies via electronic media, and Polies are generally required only to "use discretion" in such interactions. However, Raytheon banned media contacts among its staff during the Schemenski evacuation in March, and even Polies who are not Raytheon employees decided to cooperate with that order.
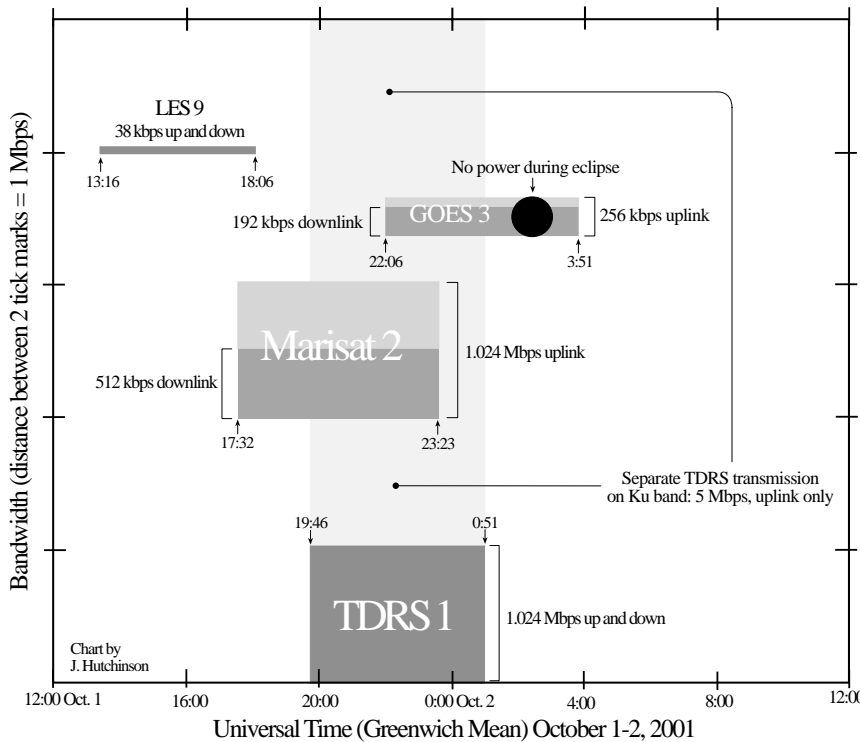
South Pole communication satellites. Gray areas represent times of availability and bandwidth for satellites serving the South Pole. Because earth progresses 4 minutes per day in its orbit around the sun, add 4 minutes for each day before 1 October 2001, and subtract 4 minutes a day after 2 October. The LES 9, at 38 kilobits per second, provides bandwidth roughly equivalent to that of a household modem. GOES 3 is eclipsed by earth for up to 72 minutes a day from mid-July to early October; the satellite's solar panels go dark and power is shut off to conserve batteries. Abbreviations: Geostationary Operational Environmental Satellite (GOES), Lincoln Experimental Satellite (LES), Tracking Data Relay Satellite (TDRS), Maritime Telecommunications Satellite (Marisat).

Beakers and Bear Claws: Internal Communication

U.S. operations in Antarctica have been under direct civilian control (National Science Foundation) since 1971, but internal communication at Amundsen-Scott retains a military flavor, tempered by heavy doses of humor and frontier egalitarianism.

Top Photo: *South Pole meteorologist Nathan Tift keeps score for a game of radio darts by communicating via radio with rival teams at a New Zealand Antarctic station 1500 kilometers away. Except for this extraordinary mode of communication between competitors, the game is the same as regular darts. (Photo by John Bird)*

Bottom Photo: *Satellites and information technology are lifting the burden of isolation for workers at the South Pole. Nevertheless, Canadian scientist John Bird and his wife Jennifer, a cook at the Pole while on leave from her graduate music studies, take special care in transmitting symbols "from the bottom up."*

Announcements that go out via e-mail or over the station public address system contain routine news and advisories as well as jokes, advertisements for free beer at "Polemart," and notices when there is an especially beautiful aurora to be viewed.

Weekly "all hands" meetings attended by all Polies address routine safety procedures and other status reports. Everyone signs a sheet to show that they received the safety briefing; then the various departments give their reports: *Jed, anything from the galley?* "We'd like to ask people to tell us if they need anything, rather than just taking it, because we need all our food for planned meals." *Kirk, anything from cargo?* "Let us know if you need anything moved." *Dean, anything from computers?* "We're going to shut down the server for an hour before the power outage." *Dave, anything from comms?* "Marisat is coming on line every day at 6:30; we're working on the problem."

You get the idea.

For all its integration into worldwide communication systems, the South Pole remains a distinct subculture—something that is inevitable at the center of the planet's highest, driest, windiest, coldest continent, a place where the year is divided into one long day and one long night. The best window into any culture is its language, and so we close with a sampling of the colorful lexicon of the Polies.

300 Club: To become a member, you must (1) sit in a sauna at +200°F when the outside temperature hits −100°F; then (2) while remaining unclad, run outside around the ceremonial South Pole marker. Initiates experience a temperature drop of 300°F.

bag and barrel: System for human waste management where plumbing is unavailable. Blue polyethylene bags of waste are stored outside in steel drums.

beaker: Scientist.

bear claws: Outer mitts with fur backing.

boondoggle: Coveted, unofficial, possibly approved participation in a trip from the station.

diamond dust: Ice crystals that fall like snow on clear days.

freshies: Fresh fruits or vegetables flown in from New Zealand.

hero shot: Photograph of oneself at the ceremonial South Pole marker.

MacTown: McMurdo station, an American base on the Antarctic coast; popular vacation spot for Polies.

radio darts: Popular game for Polies and other Antarctic workers, played with radios.

sleigh ride: Bygone practice in which a group of MacTown personnel would be flown to the Pole for hero shots.

slushies: Drinks made from a mixture of snow and an alcoholic beverage.

The Ice: Antarctica.

toast: Mental state induced by a long stay on The Ice.

tourist: n. 1. Summer resident (of which there are about 200 each year). 2. Visitor.

winter over: 1. *v.* To spend the winter months at the Pole. 2. *n.* (hyphenated) A person who spends winter at the Pole (of which there are about 50 each year). Coauthor Bird is a winter-over for 2001.

Canadian atmospheric scientist John Bird (birdjo@spole.gov) *is currently based at Amundsen-Scott South Pole Station, where he is measuring global atmospheric circulation, climate change, and atmospheric gravity waves for the University of Illinois at Urbana-Champaign.*

Jamie Hutchinson (jhutchin@uiuc.edu) *manages the publications office in the Department of Electrical and Computer Engineering at the University of Illinois at Urbana-Champaign. He is a member of the PCS editorial advisory committee.*

Communicating from the South Pole has been not only a technical challenge, but also a public relations imperative.

FROM THE EDITOR

out before being recoded in *Newsletter* style. Headers, footers, and tables lead the casualty list. **Embed only enough specialized formatting and highlighting (boldface, italics, bullets) to show me your preferences.**

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

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

Remember the Ides of…

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

Deadlines

The 15th day of each odd-numbered month is the deadline for publication in the succeeding odd-numbered month. For example, the deadline is 15 November for the January/February 2002 issue, 15 January for the March/April issue, etc. You won't be far off (and never late) if you observe the Ides of November, January, March, and so on.

If you need further proof that the human race is doomed through stupidity, here are some label instructions on consumer goods:

• On a Sears hair dryer: "Do not use while sleeping."

• On a bag of Fritos: "You could be a winner! No purchase necessary. Details inside."

• On a bar of Dial soap: "Directions: Use like regular soap."

THE LABYRINTH OF STYLE

RONALD J. NELSON

The Aeneid *is the earliest major example of truly labyrinthine literature.*

Developing a satisfying style of writing has its parallel to venturing into a labyrinth and arriving at the center. Like Theseus, who entered the Cretan labyrinth to slay the bull-man Minotaur (aided by the thread given him by Ariadne), professional communicators can overcome the dangers within by preparing well to encounter and conquer the beast of ignorance that lurks at the center of poor writing. To do so does not mean that one can then rest on his or her laurels, but that he or she can feel some confidence in crossing the threshold into the next labyrinth.

Every labyrinth or maze (in keeping with common practice, I use the words interchangeably) has an entrance, exit, path or paths, center or goal, movement through, pace of movement, obstacles, right and wrong decisions, clues, dead ends, frustrations, and joys. A purist would argue that a labyrinth is *unicursal*, having only one tortuous way to the center and the same way back to the entrance/exit. (Hence, a case could be made that Theseus really did not need the thread.) And a maze is *multicursal*, having right and wrong decision points, false fronts, and the like. In both cases, the goal is to reach the center and then to exit the structure. If a person cannot find the center of the maze or labyrinth, the maze is said to be *impenetrable*. If the person cannot find the exit, it is said to be *inextricable*.

What is required to be successful in a labyrinth or maze? For the labyrinth, the answer is time, endurance, and determination; for the maze, mastery over frustration and bewilderment. For both, the traveler must pick up on available clues and interpret them accurately, a matter of reading bodily rhythms and pacing the self, or of being logical about inferences, for example. In any case, the successful traveler reaches the center or goal, which may be either a physical or a nonphysical (mental or spiritual) location. Or, in the case of the professional communicator, it may be a splendid document or a telling presentation. The professional communicator surely needs the maze-treader's traits and others to succeed. Both traveler and professional communicator can then savor their victories.

Sometimes a person is fortunate enough to be provided with a guide or mentor on the journey, as Dante was with Virgil and later Beatrice in *The Divine Comedy*. The best guides convey the feeling not only of giving sound advice (the voice of experience) but also of being a companion to the maze-treader for part or all of the trip. I suggest that we take Penelope Reed Doob's *The Idea of the Labyrinth: From Classical Antiquity Through the Middle Ages* (Ithaca, NY: Cornell University Press, 1990; paperback, USD 19.95) along with us on the road to stylistic excellence. It is a magnificent scholarly work devoted to this thoroughly engaging topic. From it, professional communicators can learn much about the myriad factors that contribute to reaching this lofty goal. As with other kinds of writing, the value of such a book depends both on what is said and how it is said. In the case of Doob's work, the writing stretches the mind and heart by its very scholarly nature. We need that elasticity to develop our capacities, especially if we have become accustomed to mundane, unchallenging writing.

Doob's book is sensibly organized in that it reflects the order suggested by its title and subtitle. (Titles generally should sufficiently indicate content.) Her introduction, Charting the Maze, orients the reader well in terms of providing some relevant history, terminology, statement of purpose, and in-depth definition and description of what she means by "the idea of the labyrinth."

For Doob, that phrase encompasses the visual and verbal signs characterizing the maze as well as its ruling principles and formal properties. She is interested not only in real (actual, physical) labyrinths, but also in metaphorical labyrinths involving traits like "enforced circuitousness;

disorientation; the idea of planned chaos; the *bivium* or critical choice between two paths; inextricability; intricacy; complexity" and "how constellations of these features operate in things, metaphors, and texts that function like labyrinths even though they may not be identified as such" (p. 2).

Doob's introduction could be profitably studied for how well it prepares the reader for what ensues in the rest of the book. Part one covers the labyrinth in the Classical and early Christian periods, focusing on literary witnesses like Virgil, Pliny, and Ovid; the unicursal and multicursal paradigms and the essence of the maze; and the metaphorical aspects of the labyrinth, such as the complex artistry of the product, the difficult process, and the attendant inextricability or impenetrability of the maze.

Part two deals with the thorny problems of definition and etymologies, medieval mazes in art and architecture, moral labyrinths in medieval literature, and textual labyrinths as they contribute to an aesthetic of the field based on rhetorical aspects of those texts.

> *The professional communicator needs the maze-treader's traits to succeed.*

Part three, Labyrinths of Words, masterfully applies the theoretical foundation established up to this point to four central texts: Virgil's *Aeneid*, Boethius' *Consolation of Philosophy*, Dante's *Divine Comedy*, and Chaucer's *House of Fame*. Any of Doob's opening comments on those works could be studied for their diction, sentence structure, logic, and content, as could virtually any other part of the text.

Of Virgil's magnum opus, for example, she says, "The *Aeneid*, one of the most influential works of western literature, is the earliest major example of truly labyrinthine literature: it includes explicit images of the maze and references to its myth, employs a labyrinthine narrative structure, and embodies themes associated with the idea of the labyrinth…" (p. 227).

Of Dante's great work she notes, "The literature of Christian conversion is laby-rinthine by nature: converts, whose very name implies a purposeful change in direction, turn from false ways to true ones and from a disoriented, blind pursuit of false goods to an often circuitous quest for the right goal, in light of which previous paths seem chaotic and futile" (p. 271).

And of Chaucer's *House of Fame* she observes that it "is slighter than its three self-avowed labyrinthine models, but this sparkling tour de force may be the most comprehensive (if not comprehensible) and creative culmination imaginable of the medieval labyrinth tradition, and hence a fitting conclusion to this book" (p. 307).

One of the major characteristics of labyrinths is "a constant doubling back" because of their circuitous nature (p. 1). Like walking in a maze, professional communicators must enter the looping process of doubling back over concerns before they settle on the right wording: "Is this the best word for the context?"; "Is my phrasing ambiguous here? Do I need to clarify it?"; "Can my reader grasp the content the way I want it to be understood?"; "Do my graphics serve their purpose of providing visual reinforcement to the concepts introduced?"; and "Is what I'm saying in line with company policy?" among innumerable other matters. To become immersed in that doubling back process is evidence of a care for the product and a commitment to excellence that is highly likely to reach its goal.

My next column will address additional aspects of the labyrinth as they apply to professional communication, using other amazing sources. In the meantime, the interested reader may wish to send for a fine journal devoted to the subject of mazes and labyrinths: *Caerdroia*. This annual publication can be purchased from Jeff Saward, Publisher, *The Journal of Caerdroia*, 53 Thundersley Grove, Thundersley, Essex SS7 3EB, England; the cost is USD 15.

Ron Nelson is an associate professor of English, James Madison University, Harrisonburg, VA 22807; +1 540 568 3755, fax +1 540 568 2983; nelsonrj@jmu.edu.

NEWTONIAN TELECOM

Professional communication is the art of putting forth straightforward stuff on real matters. Leave the convoluted erudition to the publish-or-perish fraternity; in the marketplace of minds, there's no doubt that simplicity sells. But how do you attain it? Easy, according to Elmore Leonard (1926–), the "Dickens of Detroit," who, when asked in 1986 why his detective novels were so popular, remarked: "I leave out the parts that people skip." The phrasing was contemporary, the philosophy not. More than two centuries earlier, writer-turned-philosopher Voltaire observed that "the way to be a bore is to say everything" ("Le secret d'ennuyer est…de tout dire" in *Sur la Nature de l'Homme*, v. 174-5).

OK, the secret's no secret and hasn't been for centuries. Can it possibly be applied to the complexities of modern high technology? As formerly distinct fields converge, could it possibly apply to telecommunications, networking, and, even worse, the Internet, which now encompasses almost all electrical and electronics pursuits covered by the IEEE save electric power generation, distribution, and squandering?

Yes, it can, if you have the tenacity to carry through three essential steps. First, you enter the field from outside, as any good lexicographer should, so as not to accept anything at face value. Second, you pore over all glossaries, dictionaries, and learned (that is, arcane) documents published by regulatory agencies and professional organizations. Third, you beg in-house definitions from savvy engineers with nothing better to do than answer nit-picky questions of definition, but you prudently refrain from listing made-up acronyms, silly abbreviations, and proprietary product names. Moreover, you devote 23 years to the task, as Harry Newton has to date in compiling *Newton's Telecom Dictionary**, now in its 17th edition.

In his biographical sketch on the back cover, Newton confesses to not being a telecom engineer or, for that matter, an engineer at all. His undergraduate degree is in economics, from the University of Sydney, and his master's degree is in business administration, from Harvard. But he early ("one wet weekend with nothing better to do") saw the need for more understandable communications on telecommunications. He founded the first networking magazine, *LAN Magazine*, now *Network*, as well as three telecom monthlies: *Call Center*, *Computer Telephony*, and *Teleconnect*. He started the unbelievably successful Computer Telephony Conference and Exposition (CT Expo). As he worked along, he saw an increasing need for a comprehensive dictionary, as even telecom professionals couldn't grapple with the flood of new terms, much less their managers or the users—the only ones who admitted to floundering. In 1984 he compiled the first *Newton's Telecom Dictionary*.

The rest is history. The strength of the book is in Newton's currency of plain talk, devoid of didactic oversimplification. If a definition is adrift in daily use, he calls the spade a spade: The definition of "Bps" starts with: "Bps is confusing. Is it bits per second or bytes per second?" And humor, long an outcast in technical description, is a frequent guest: "Skunkworks" is as carefully defined, with its etymology, as are other, more arcane terms in the book.

Pick a telecom term, any telecom term, the dullest you can imagine. You'll probably find it (and 21 000 others) in *Newton's Telecom Dictionary*, refreshingly less dull than elsewhere. But alongside it, you'll probably find another term with a more amusing definition, which will lead you through a convoluted path to yet another term, which…. The book is a page-turner that invites use. Isn't that the way dictionaries should be?

Isn't this the way a dictionary should be?

* Newton's Telecom Dictionary by Harry Newton, New York, CMP Books, 17th ed., February 2001, 782 pages, soft cover, USD 34.95, ISBN 1-57820-069-5.

G O O D   I N T E N T ,   P O O R   O U T C O M E

JEAN-LUC DOUMONT

An effective topic sentence states not only the topic, but also the message.

INDEED!

Getting the message across: That is how participants of my training programs almost always define effective communication. Few, however, can readily provide a definition of the word "message," though most, after some thought, agree that a message is to information what conclusions are to results: It covers the interpretation of information more than the information itself and, as such, is normally both audience-oriented and purpose-oriented. These definitions are not without consequences, among which are the following two.

First, and as a kind of "Principle Zero" of effective communication, a document or presentation should *have* messages in the first place. Although such a statement should be obvious, we can probably all remember documents or presentations that left us with the unpleasant question, "What's the point?"; a lot of information, but unfortunately no explicit message.

Second, and probably far less trivial, effective documents or presentations place the message up-front and supporting elements afterwards, rather than the other way around. As proposed in my last column ("Columbo, Not Poirot" in the July/ August *Newsletter*), the apparently commonsense story-telling approach, with conclusions at the very end, works poorly in professional contexts. Stating the message first works better for full documents or presentations, and also for individual sections or paragraphs.

Technical writers usually agree that effective paragraphs start with a topic sentence, orienting the readers to the topic, and possibly the structure, of the paragraph. A paragraph without a topic sentence is often misleading at first reading and does not allow readers to retrieve information easily through subsequent skimming. Such paragraphs, lacking a unifying theme, are unfortunately frequent in the materials and methods sections of scientific literature and research reports.

I further argue that an effective topic sentence states not only the topic but also the message, namely, the one thing that the audience must remember *about* the topic. It states not only the *what*, but also the *so what*.

Paragraphs that start with the topic but not the message are frequent in the results sections of scientific literature and research reports. In chronological fashion, the first sentence refers the reader to a figure by describing it (the *what*, as in "Figure 5 shows the evolution of temperature as a function of time"); further sentences make observations, and the very last one concludes (the *so what*, as in "The temperature increased roughly linearly with time").

Not only is the *so what* infinitely more interesting for the audience, it also usually contains the *what*, making a separate statement of the latter uselessly redundant. In the preceding example, the paragraph could more usefully state the message in the first sentence, with a simple reference to the figure, as in "The temperature increased roughly linearly with time (Figure 5)." Subsequent sentences would elaborate on (discuss, detail, illustrate,…) the point, in *theorem-proof* fashion.

Turning chronological paragraphs into message-first ones requires more than just turning the last sentence into the first one: It requires a change of logic, perhaps conveyed chiefly through various signal words. A chronological structure, leading to conclusions as an end point, is essentially a logic of *therefore*. A message-first structure, by contrast, is more typically a logic of *indeed*.

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

THE FREELANCE PERSONALITY

JULIA LAND

Is there such a thing as a freelance personality? The freelancers I know (myself included) pride themselves on their individuality. But, when examined as a group, successful freelancers do share some common character traits. Before we discuss those traits, let's spend a moment on the definition of success.

Certainly, by successful freelancers we mean those who achieve success measured in *monetary* terms. That is, they earn enough income to meet their financial needs. But, for the sake of this column, we are going to include another type of success: Successful freelancers are *happy* with their freelance business. They are not freelancing until something else comes along and they do not wish they could meet their financial needs some other way.

What are the traits that characterize the successful freelancer? The ones I find most significant are flexibility, a strong work ethic, fiscal responsibility, good social skills, self-confidence, and resilience.

No one person is likely to have all those traits in equal strength, and they are also found in individuals who are successful employees. But here is why those traits are so important to freelancing.

Flexibility

Networking is a primary means of finding new work.

Perhaps the most important characteristic is flexibility: the ability to handle uncertainty and change gracefully, to be resourceful, to learn quickly.

A freelancer's life is filled with change. There are new clients, new projects from old clients. The successful freelancer remains calm and comfortable and adjusts quickly to such changes.

Clients expect the freelancer to quickly be up to speed on the work and to be productive right away. They do not want to pay while the freelancer learns. To keep clients happy and to attract repeat business, the freelancer must be able to learn quickly and put new knowledge to use immediately.

A freelancer can build a stable of regular clients and have a track record of staying as busy as he or she wants, but the fact remains that the work can always dry up. There may be gaps of weeks or even months between freelance assignments. Until the next contract is signed, the freelancer can't be sure where the next check is coming from. Freelancing is not for someone who is paralyzed by that uncertainty.

Because of the unpredictability of the freelancer's work, he or she may be faced with unusual and unexpected problems. The freelancer must be resourceful enough to find solutions quickly.

Strong Work Ethic

Freelancers need to be self-motivated. They don't have bosses coming by every so often to see what they are doing and to make sure they meet their deadlines. So freelancers must take on that function themselves. They need to be self-starters and willing to work hard, often more than the typical 40-hour workweek.

The commitment to high quality work and the ability to produce it are as important as a willingness to work hard. A freelancer with a reputation for good work will find many more opportunities than one with a mediocre standard.

Freelancers should be highly organized with the ability to plan ahead. If they are working for more than one client at a time, they must keep on schedule for all clients and still plan ahead for finding new work when the current assignments are completed.

Fiscal Responsibility

A freelancer's ability to manage money has as much to do with his or her success as the ability to earn it. To be comfortable with the uncertainty that pervades a freelance career, the freelancer must have financial reserves.

Although it is prudent for everyone to have savings, it is critical for freelancers,

who often experience a more uneven cash flow than regular employees. There may be gaps between clients. More likely, there may be a delay of 30 to 60 or even 90 days between starting a new project or client and actually receiving payment from the client. The successful freelancer must have the reserves to wait for the payment.

In addition, a freelancer with adequate reserves can be choosier about which clients and projects to accept. A freelancer who is concerned about being able to pay bills finds it much harder to turn down an undesirable project or pay rate than one who can afford to wait for a week or even a month before accepting a new project.

Social Skills

Freelancers are constantly working with new people. They meet new vendors, new clients, and employees of clients. The freelancers must be able to forge the necessary working relationships in a minimum amount of time.

For many freelancers, networking is a primary means of keeping abreast of the market and of finding new work. Successful networking requires a genuine affection for people, and the ability to relate well with them.

Self-confidence

The finding and securing of new clients and new work requires self-confidence. Freelancers need to be able to sell themselves, to convince the potential clients that they can do the work required and, furthermore, are worth the rates they want to collect.

Most clients are concerned about costs, and justifying freelance rates can be difficult. Freelancers must be confident that they are worth the asking rate and that if this project doesn't materialize, another will. Having a financial reserve allows the freelancer to wait for that other project to materialize.

Self-confidence goes hand in hand with the self-motivation that is part of work ethic. Just as there is no boss to stop by and be sure the work is on schedule, there

Not only money: Successful freelancers are happy with their business.

is no boss to stop by with pats on the back. Freelancers have to have confidence in their skills so they know when they are doing good work, and so they can keep going with few, if any, words of praise.

Freelancers need enough confidence to be decisive, to make and stick to decisions. There is no time to revisit decisions again and again.

Freelancers must also have the self-confidence and the self-knowledge to recognize their weaknesses and to compensate for them. They may have to ask others for assistance, whether it is subcontracting part of a project or performing some other professional service. They may need to adjust their work habits or environment to cope with their personality.

For example, I know I am easy to distract when at home. A home office is not an effective place for me to work. The solution for me is to rent space in an office building. By going to my office each day, I am more productive.

Resilience

The freelance life has its share of disappointments (the job that got away) and problems (the fixed-fee job that's taking much longer than planned). A freelancer must be able to absorb those issues, deal with them, and move on. The freelancer cannot stay down or disappointed. He or she must stay focused and optimistic.

Resilience includes flexibility, but it also includes determination. Whether it is to get a certain client or simply to succeed as a freelancer, the freelancer must have the determination to proceed no matter what.

The support of family and friends can be critical to maintaining resilience in the face of difficulties, but the freelancer must provide most of the resilience from within.

Additional Factors

There are two other factors that, while not personality characteristics, are also vital to freelance success.

The first is *good health*. A freelancer in a sole proprietorship cannot afford to get

NET NOTES

WHO IS *BOBBY*?

ELIZABETH MOELLER

Many Web sites that meet accessibility standards are also more user-friendly for those without disabilities.

If you work for a governmental agency or any other organization responsible for disseminating information to the public, you may have heard about the recent revision to section 508 of the Rehabilitation Act of 1973. In a nutshell, any information technology (IT) procured by the federal government (or any agency with a federal government contract) after 25 June 2001 must meet the accessibility standards set forth by the Access Board. These standards are based on the long-standing Web Accessibility Initiative (WAI) of the World Wide Web Consortium (W3C).

Now that I have thrown some acronyms at you and confused you with the title of this column, it's time to get to the meat. All of these acts and initiatives are in place to ensure that Web sites developed by and for the federal government are accessible to disabled persons. For example, blind Web-site visitors will use text-to-voice converters to "read" a site. The ability of these converters to translate the Web site relies on the design of the site.

What Does Accessibility Mean?

First, a little background on Web accessibility in the United States. For information on how other countries are handling Web accessibility, visit the policies page of the Web Accessibility Initiative (*http://www.w3.org/WAI/Policy/*). In the U.S. the Rehabilitation Act of 1973 contains two sections that outline the need for accessibility: sections 504 and 508.

Section 504 establishes the "principle of programmatic access to federally funded programs." While it does not specifically recognize the Internet or World Wide Web, it lays the foundation for accessibility of those services.

The recent revision to section 508 addresses the Internet and the World Wide Web with regard to accessibility. In addition, it recognizes the Assistive Technology Act of 1998 and extends the requirements to state governments. Finally, the Americans with Disabilities Act (ADA) of 1990 makes it illegal to deny access to those with disabilities. In 1996 the U.S. Department of Justice affirmed this in a letter to Senator Tom Harkin, who was inquiring whether a Web-only business was required to meet ADA standards (*http://www.usdoj.gov/crt/foia/tal712.txt*).

The World Wide Web Consortium reports that between 10 and 20 percent of any country's population have some form of disability. Although not all disabilities affect accessing the Web, people with vision, hearing, dexterity, and short-term memory disabilities do have problems accessing the Web (*http://www.w3c.org/Talks/WAI-Intro/slide6-0.html*). The vision disability problems are obvious. Those with hearing disabilities are at a disadvantage when audio is used to convey information without including a printed transcript. Those with dexterity problems are at a disadvantage when site design prohibits the use of voice-command software. Finally, those with short-term memory problems are hindered when site navigation is unclear or illogical.

Accessibility means that your (or any) Web site is designed so that text-to-voice converters can interpret it. It means that visitors can use voice-command software to navigate through it. It means that your navigation is clear and coherent to prevent a "lost in space" feeling, a feeling often shared even by those without short-term memory problems.

Accessibility does not mean that you have a bland Web site. Many accessible sites are well designed and graphically pleasing to the eye. W3C reports that many Web sites that meet accessibility standards are also more user-friendly for those without disabilities (*http://www.w3.org/Talks/WAI-Intro/slide7-0.html*). For example, audio with an accompanying text-based script is more usable in noisy environments or in companies that did not install speakers with their computer systems. Audio also helps accommodate many different learning styles.

How Do I Know Whether My Site Is Accessible?

This is where *Bobby* comes in. W3C has identified three priority levels for accessibility. All Web sites that must conform to ADA or section 508 guidelines *must* meet priority level 1. Those that do not will be impossible for some groups to view and *should* meet priority level 2, at which some groups will still find it difficult to access information, but not impossible. Web sites may want to meet priority level 3, which means they remove all barriers to all groups. The complete content guidelines can be found at *http://www.w3.org/ TR/WCAG10/.*

Bobby is a product of the Center for Applied Special Technology (CAST). It is a free piece of software, downloadable from CAST (*http://www.cast.org/bobby*), that Web developers can use to determine what priority level their Web site meets. You can also use the online version. *Bobby* provides explanations and rationales for problems it encounters and suggests what developers could do to improve their *Bobby* rating.

Sites that meet priority level 1 accessibility can display the *Bobby Approved* logo.

A second way to check your site's accessibility is to view it in Lynx, one of the original text-only browsers for the World Wide Web. There is a free Lynx viewer at *http://www.delorie.com/web/lynxview.html.* The check here is to see whether you can navigate through your Web site, using Lynx, and still find the information you are looking for.

For the record, the main portion of the PCS Web site (*http://www.ieeepcs.org/*) meets the requirements for *Bobby* approval. In the next issue, I will cover the accessibility guidelines in more detail.

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

> *The main portion of the PCS Web site meets the requirements for Bobby approval.*

WORKING FREELANCE
(continued from page 15)

seriously sick. Not only would the income be reduced, but also clients may decide to seek other freelancers if they are concerned that their work will not be done. Further, without the stamina good health brings, it would be impossible to work the long hours that it takes to establish a freelance business.

The second is *luck*. There is a large element of chance in operating a freelance business. A chance meeting or a casual remark may lead to an opportunity. Good freelancers are always ready to capitalize on luck. They keep their professional skills in top shape and their networking connec-

tions in good working order. They have a ready supply of business cards. They follow up on the chance encounters, converting them to opportunities either now or for the future.

So, that is the picture of the ideal freelancer personality. Do I fit the ideal? Not even close. None of the freelancers I know fills the mold completely, either. But we all manage to make a living as freelancers anyway. And most of us enjoy ourselves.

The author has been a freelance technical writer for eight years. She is lucky enough to live and work in Houston, Texas. She can be reached at julia_land@ieee.org.

> *Success means not only money but also contentment.*

"Nothing so conclusively proves a man's ability to lead others as what he does from day to day to lead himself."

— *Thomas J. Watson*

TOOLS AND OBSTACLES

PETER REIMOLD AND
CHERYL REIMOLD

Please take a moment to think of a colleague at work. Would you prefer him or her to consider you as a tool or an obstacle? Would you rather be approached as a help or a hindrance to that person's job or career?

Perhaps you are thinking, "Neither! I don't exist to be either a tool or an obstacle for somebody else." If so, your reaction mirrors that of 98 percent of people questioned. Unless we have a pitifully low opinion of ourselves, we do not appreciate being treated as a cog in another person's machine.

Now, in your mind, go back to the office. Say you're working on a project and need information, help, or cooperation from someone else. *How do you treat that person?* Do you regard him as a complete, interesting human being? Or do you see him as a tool or obstacle to getting your job done? Hmm?

People Resent Being Tools or Obstacles

Treating other people as tools or obstacles is one of the biggest causes of miscommunication at work. The problem is that almost all of us have been taught to be task-oriented problem solvers. We're also overworked. The result is that we stop seeing other people as valuable human beings whom we respect and enjoy. Instead, we see them as…right: T and O.

What happens when we do that? Earlier, you noted your own reaction to such treatment. You become resentful, *and you do not want to cooperate*.

Ironically, task-oriented people who approach a colleague as a tool or an obstacle jeopardize not only the relationship but also the success of the task.

A (Personal) Case History

We know of a consultant (one of us!) who committed this error some years ago. Invited to teach a presentation skills course at a telecommunications corporation, the consultant arrived on the second day to find that the VCR she had ordered was not there. Since she had videotaped the presentations the previous day, she needed the VCR to go over them with the presenters. She asked the secretary of the person in charge to find her a VCR.

The secretary took her time, then called the appropriate person and had a long, gossipy conversation. She hung up and said, "Sorry, they need the VCR for something else."

At this point—five minutes before the class was to begin—the consultant lost whatever equanimity she may have had. She now perceived the secretary as an obstacle instead of a tool and proceeded to treat her as such.

"Obviously," said the consultant, "you have no interest in helping me get what I need. I will go to your boss and tell him how unhelpful you have been. I'm sure he will manage to get me a VCR."

The boss found a VCR and reprimanded the secretary. The consultant won the battle (she was able to teach her course as planned) but totally lost the war. On all her subsequent classes there, the secretary has found ways to introduce difficulties: reserving the smallest possible conference room, setting up measly refreshments, and so on.

It was the consultant's fault. She treated the secretary first as a tool, then as an obstacle.

The Solution

What is the answer, then? The *only* approach guaranteed to work, in the office or anywhere else, is people-focused communication. This means seeing the other person as more important than the task. The mantra of a great communicator could be this:

The other person matters most. Always. There are no exceptions.

The other person matters most. Always. There are no exceptions.

In fact, once we refuse to treat other people as tools or obstacles for our work, our work will benefit from it. Not to mention our work lives.

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

IPCC 2002: REFLECTIONS ON COMMUNICATION

While you're planning for IPCC 01 in Santa Fe, set some time and thought aside for IPCC 2002: 17-20 September in beautiful downtown Portland, Oregon. The theme, Reflections on Communication, encompasses the many dimensions of a profession vital to our technological society. *[And explains why we're calling it IPCC 2002 instead of IPCC 02. Ed.]*

The call for papers includes the following categories: abstract conceptualization, active experimentation, concrete experience, and reflective observation. It is posted on the PCS Web site (*http://www.ieeepcs. org/2002/*) and look for a copy in your registration kit at the Santa Fe conference.

Contact *pamela.kostur@sympatico.ca* for more information.

The conference committee is far-flung and diverse: Conference chair Laurel Grove

and finance chair Paul Seesing are from Salem, Oregon. Program cochairs Pamela Kostur and Jane Aronovitch are from Toronto, Ontario, Canada; publications chair Terry Malkinson is from Calgary, Alberta; and publicity chair Julie Gephart is from Richland, Washington. We have been "meeting" by phone and e-mail regularly since March and planning is well under way. We'd love to have you join us!

Visit *http://www.ieeepcs.org/2002/* for updates or contact *LGrove@COVANSYS.com*.

EXPERIENCED IN WEB-BASED EDUCATION?

PCS is about to chart an education initiative and we need your help. If you have experience in distance-learning curriculum design, please consider joining our group as we direct development of an exciting new online

communication course for engineers. Our group will identify a target audience, course subject, vendor to create the course, and marketing opportunities. If you would like to join our virtual team, please contact Nancy Coppola, *coppola@adm.njit.edu*.

BEWARE OF IDIOMS

This spring the Professor enjoyed many pleasant late afternoons in her garden, which was filled with particularly beautiful flowers this year. She also enjoyed hosting a third cousin, Greta, who visited the United States for the first time from her native Austria. While showing Greta the variety of flowers in her garden, the Professor was reminded of the delicate nature of language, which can be prone to overgrown, unwanted weeds if not well cared for.

The Professor was explaining to Greta that the local nursery owner advised her to plant Impatiens plants six inches apart, but she admitted to her cousin that she takes this advice with a grain of salt. Greta, whose English is quite good, looked inquisitively at the Professor, who explained that the expression means that one is unlikely to heed 100 percent of the advice.

That evening the Professor, curious about the origin of the "grain of salt" idiom, opened her oft-used copy of *Loose Cannons and Red Herrings: A Book of Lost Metaphors* by Robert Claiborne (W. W. Norton & Co., 1988) to see if this idiom is documented therein. Indeed, the book explains that this idiom is said to be of Latin origin, although no classical writer is known to have used the phrase. The book continues, "The most likely explanation is also the simplest: if you take someone's statement with a grain of salt, it evidently needs some seasoning before you can swallow it."

This exchange with Greta reminded the Professor of the frequent use of idioms in the technical information that she edits. Idiomatic expressions cause problems for translation tools, human translators, and especially for users for whom English is a second or third language. Even users from other English-speaking countries have difficulty understanding some idioms that originate in the United States (and U.S. users also have trouble understanding some idioms that originate in other English-speaking countries.)

Because of the confusion that idioms can cause, the Professor advises (with no salt needed) that writers avoid using idioms like these in any information that might be translated or used by people for whom U.S. English is not the primary language. Remember that those users are likely to translate these expressions literally, one word at a time. Imagine how a non-native English speaker might translate the following idioms:

catch 22
clipped (truncated)
cut and dried (straightforward)
holding tank (buffer or temporary work area)
houses (stores)
keep in mind (remember)
on the fly (spontaneously)
on the other hand (alternatively)
on the spot (immediately)
out on a limb (taking a risk)
pass on (grant)
pick up (use)
plays little part (has nothing to do with)
rule of thumb (guideline or estimate)
run short (use all available resources and have no more)
shut down (turn off)
shut out (deny access)
small window (small period of opportunity)
take…with a grain of salt (don't assume it is always true)
tie up (monopolize, fully use)
with…in mind (considering that)
zero in (determine)

As the Professor gazes admiringly over her well-tended garden of beautiful flowers, she concludes by admitting that using idioms in our everyday speech or in information whose audience is 100 percent native English speaking can make the language more interesting, more appealing perhaps. Beware, however, the idioms that creep into language for our non-native English-speaking users!

Copyright 2001 by IBM Corporation. Used with permission. Professor Grammar is an advisor to the IBM Santa Teresa Laboratory Editing Council. Each month she sends a lesson to the technical writers at the Laboratory. Many of the Professor's lessons are based on tenets described in the Prentice-Hall book Developing Quality Technical Information: A Handbook for Writers and Editors, *recently authored by the Council.*

Readers are likely to translate idioms literally, one word at a time.

SUZDAL PROGRAM

International Colloquium on Professional Communication: Problems, Technology, Services

SUZDAL, RUSSIA ■ 15-16 AUGUST 2001

—— O P E N I N G C E R E M O N Y ——

■ **Colloquium highlights and welcome from the Russian Popov Society:**
Henrich Lantsberg, chair, Professional Communication Section

■ **Welcome from the IEEE Professional Communication Society:**
George Hayhoe, president (presented by Lisa Moretto)

■ **SESSION A: THE ART OF COMMUNICATION;** Henrich Lantsberg, moderator

1. Patrick Hofmann (Quarry Integrated Communications Inc., Canada) *Away With Words!*

2. Mark Kolchinsky (Institute for Industrial Development–Informelektro, Russia) *Effectiveness of a Document as an Instrument of Professional Communication: 40 Years After*

3. Gennady Vorobiev (Scientific Council on Cybernetics, Russian Academy of Sciences) *Interpersonal Communications in Science: Contemporary Status and Tendencies of Development*

4. Karen Baranich (Scana Services, U.S.) *Evaluating Your Own Communication*

SESSION A (cont.); Muriel Zimmerman (U.S.), moderator

5. Irina Marshakova-Shaikevich (Institute of Philosophy, Russian Academy of Sciences, and University of Bydgoszez, Poland) *Science on the Eve of the 21st Century: Bibliometric Assessment*

6. Delir Lakhuti (Russian State Humanitarian University) *Prospects for Automatic Text Analysis ("Understanding")*

SESSION B: INFORMATION SYSTEMS; Inessa Bukatova (Russia), moderator

1. Inessa Bukatova (Institute of Radioengineering and Electronics, Russian Academy of Sciences) *Cognitive Evolutionary Theory of Intellectual Information Systems and Technologies*

2. O. V. Esikov, R. N. Akinshin, E. M. Sukharev, and S. A. Kislitsin (Joint Stock Company, Russia) *Information Security Mathematical Model in Modern Automatic Systems for Data Processing*

3. E. A. Rogozhnikov (Institute of Radioengineering and Electronics) *Analysis of Processes of Intellectualization of Integrity-Evolutionary Modeling Information Systems*

4. Eduardo H. Clark (Nortel Networks, U.S.) *Documentation Management Systems for Professional Services Organizations*

SESSION B (cont.); Ron Blicq (Canada), moderator

5. O. M. Roshchupkin (Institute of Radioengineering and Electronics) *The Integrity-Evolutionary and Automatic Banking Systems of New Generation*

6. L. M. Martynov (Ministry of Communication and Informatization of Russian Federation) *New Century—New Communication Equipment*

7. V. S. Zalogin (Research Institute, Russia) *Scientific Information Activity Rating in a Research Evaluation Management System*

■ **SESSION C: ELECTRONIC BOOKS AND LIBRARIES;** Ruggero Giliarevsky (Russia), moderator

1. O. Barysheva and R. Giliarevsky (All-Russian Institute for Scientific and Technical Information, Russian Academy of Sciences, and Moscow State University) *Electronic Books and Libraries: Russian View*

2. N. E. Kalenov (Library for Natural Sciences, Russian Academy of Sciences) *Automatic Information – Library Service for Scientists*

3. A. Glushanovskii, S. Vlasova, N. Kalenov, T. Solovieva (Library for Natural Sciences) *Electronic Resources on the Internet*

SESSION D: WEB SITE DESIGN AND DEVELOPMENT;
Scott DeLoach (U.S.) and Andrei Mendkovich (Russia), moderators

1. D. I. Sidelnikov and A. S. Mendkovich (Institute of Organic Chemistry, Russian Academy of Sciences) *IPv6 in Russian Networks: First Steps*

2. Jean-luc Doumont (JL Consulting, Belgium) *Creating Web Pages: Old or New World?*

3. Scott DeLoach (User First Services, Inc., U.S.) *User-centered Design for Informational Web Sites*

4. O. Zaikin, P. Korytkowski (Technical University of Szczecin, Institute of Computer Science and Information Systems, Poland) *Queuing Approach to Performance Evaluation in Distributed Production Networks*

SESSION E: TECHNICAL COMMUNICATION EDUCATION

Part 1: TC Education in the U.S.; Lisa Moretto (U.S.), moderator

1. Julie Fisher (Victoria University, Australia) and Ron Blicq (RGI International, Canada) *Who Are the Technical Communicators and Where Is Their Profession Going?*
Part 1: Technical Writing to Technical Communication: What Is the Future of the Profession?
Part 2: The Early Years of Technical Communication

2. Elizabeth Pierce (RGI International, U.S.) *Teaching Technical Communication Skills to Children and Young Adults*

3. Gail Palmer (Georgia Institute of Technology, U.S.) *Integrating Professional Communication Skills Into Graduate Engineering Education*

4. Muriel Zimmerman (University of California, U.S.) *Educating the University Engineering Student in Communication Skills*

5. Lisa Moretto (RGI International, U.S.) *Educating Technical Professionals in Communication Skills*

SESSION E (cont.); Ruggero Giliarevsky (Russia), moderator

Part 2: TC Education in Russia

• Mark Kolchinsky

• Gennady Vorobiev

• Delir Lakhuti

• Ruggero Giliarevsky

• Irina Marshakova-Shaikevich

Round Table Discussion: Intersociety Relations and Cooperation;
Henrich Lantsberg and Lisa Moretto, moderators

Signing the Agreement on Cooperation between the IEEE Professional Communication Society and the Russian Popov Society Professional Communication Section

A Tantalizing Glance at IPCC 01

(continued from back cover)

Web site (*http://www.ieeepcs.org/2001/*) for ticket information.

The Friday program continues this diverse selection, culminating in a plenary retrospective on how IPCC and the society have changed since our last visit to Santa Fe in 1992, with some thoughts on where we might go from here.

Postconference Workshops

On Saturday, the 27th, you have your choice of four postconference workshops for an additional fee. And now you get to be tantalized as well: Because they are all-day events, you can attend only one! The following descriptions were provided by the instructors; for more information, visit our Web site.

Andrea L. Ames
Whose UI Is It, Anyway? Designing Information as Software

Today's information-rich interfaces, sometimes known as "Weblications," are becoming more prevalent, spurred by application development in Web-based technologies. Participate in several exercises and learn a few new skills, some new knowledge, and several user-interface design techniques to get you started. Start thinking about ways to design information into user interfaces (e.g., embedded assistance), enhancing the user experience, as well as ways to design user-interface and interaction into your information, making your traditional help systems more usable.

Jonathan Price
Web Writing ABCs

Professional communicators must develop an electronic style to prepare materials for Web delivery. This workshop focuses on the prose style you need if you want your documents to be easy to navigate, easy to understand, and easy to use. It will give you guidelines you can apply right away, based on usability testing and practitioner lore. You can expect to spend most of the day writing, writing, writing. You do not need to know any HTML for this workshop; our focus is on crafting text that people will like to read on the Web.

S. Martin (Marty) Shelton
Using New Media Effectively: Script Design for Information Film, Video, and Multimedia

We will explore the basic grammar and syntax of motion-media as a communication tool. Motion-media scripting has almost nothing to do with writing. Rather, it's about using filmic-design techniques to encode information in coherent kinetic visuals that engender empathy in target audiences. Our goal as communicators is to psychologically manipulate the minds of our audience so that they will say, act, do, or think to achieve the goals set for the show. If we are to maintain currency in this profession of ours, we must become proficient in motion-media design and production.

Rives Hassell-Corbiell
Writing Effective Training-Instructional Design for Technical Communicators

Learn how to make classroom, online, or CD training more than just a bite-sized repetition of documentation. Using job aids, you will perform each training development task. In addition, you will learn how to customize training, convert existing tutorials and user guides to meet a specific training need, and troubleshoot your own projects. Project management issues and guidelines for estimating development time will be included for each step of the development process.

To Learn More…

http://www.ieeepcs.org/2001/.

…Dr. Moira Gunn, keynote speaker; Dr. Janice Redish, Goldsmith Award lecturer…

"Let thy speech be short, comprehending much in a few words."

— *Apocrypha*

A TANTALIZING GLANCE AT IPCC 01

Sometimes in the day-to-day crush of deadlines and assignments we forget how interesting and exciting our profession can be. The program that Roger Grice has put together for our Santa Fe conference this October should cure that!

IPCC 01 begins at noon Wednesday, 24 October, with a keynote luncheon that also wraps up the Association for Computing Machinery's SIGDOC conference. The speaker will be Dr. Moira Gunn, host of the public radio program *TechNation: Americans and Technology.* Her familiarity with both the substance and the implications of science and technology comes firsthand. Formerly a scientist and engineer with the National Aeronautics and Space Administration, she holds a Ph.D. degree in mechanical engineering as well as degrees in computer science.

TechNation's thousand-plus guests have been tremendously varied in background and outlook; high-tech entrepreneurs and novelists and astronauts and politicians have all given their perspectives. "Everyone is a piece of the puzzle. Everyone is essential," is how Dr. Gunn explains her eclectic and inclusive approach to the

IPCC 01
COMMUNICATION DIMENSIONS

show's goal of "addressing every facet of American life through the lens of technology: a life that is changing before our very eyes."

Thus inspired to see our work in a new light, we'll begin technical sessions. The Wednesday afternoon program emphasizes computer-related topics. (SIGDOC attendees are invited to sit in on our Wednesday sessions, and IPCC 01 attendees who arrive Wednesday morning will be welcome at SIGDOC sessions. If you'd like to attend both conferences, each is extending an attractive crossover-registration discount to those who are fully registered for the other.)

Thursday brings a wide-ranging mix of topics, including some that will be presented at greater than usual length—a full 90 minutes. At noon we begin a three-hour siesta that will give you a chance to see a bit of Santa Fe without missing any talks. You'll want to come back on time, though, because Dr. Janice Redish will present the Goldsmith Award lecture, after which there will be a late afternoon session. Finally, the awards banquet will honor accomplishment and service; consult the registration page on our

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