IEEE Group on
Professional Communication

NEWSLETTER

Letter from the President

If PC's reasons for being are to help engineers (including ourselves!) communicate more effectively and inform them of news about communication, how can we justify our being?

If PC's noble aim is to serve engineers (including ourselves!) how can we work to accomplish this purpose?

First of all, let us agree to consider technical communication only, and to recognize that, because of subject and purpose, it is different from, though not opposed to, artistic and humanistic communication. Then we can encourage interest in technical communication as a skill that must be cultivated--worked at, studied, exercised, and perfected.

We can understand that technical communication is not limited to writing and speaking but has other aspects--graphics, film, attitudes, and formalism of one sort or another. In a sense, education, computers, printing, and management are all aspects of technical communication.

As a Group, we can obtain obtain "news" of these aspects and impart it to others, offer particular help with writing and speaking, make ourselves known as a source of available "know-how," act as consultants when needed, form liaisons with other Groups' AdComs.

And we can recognize communications of merit and quality by commending, publishing, reprinting, reviewing, and perhaps otherwise calling attention to and showing admiration for them.

This issue of our Newsletter tells of the things that PC is doing, to fulfill these possibilities. We are strengthening our organization--shoring up the Bylaws, specifying responsibilities, trying to identify available skills, searching out foci of active interest, reaching for new members. We have commented on newsletters, summarized articles, reviewed books, and even printed a "state-of-the-art" paper. We are "boosting" PC's June Transactions--it contains articles on computer-based communication and text-processing, and on how to write better about technical subjects.

Most important of all, perhaps, we are seeking ways in which more PC-ers than just those on the AdCom can join in serving PC Group and other IEEE organizations. In most cases, specific suggestions must come from individual members. You know what you can do--we can only say what general activities are needed.

Just now, we're interested in Area Representatives--anywhere--and new members for a 3-year-term on AdCom. The latter are expected to attend four day-long meetings (usually in New York City) each year and to work actively on Group business. Volunteers for either job, write to Tom Patterson!

Ad Com Meeting

When PC's Advisory Committee met at IEEE Headquarters in New York City on May 20, business was conducted as follows:

1. Pat McBride distributed copies of a Membership Folder that was made available at a "PC Table" during the Conference on Scientific Journals in Reston, VA, May 2-4, and also during the 24th International Technical Communication Conference in Chicago, May 11-14. Improvements and a second printing are being planned.

2. Rudy Joenk said that he expects the June issue of PC's Transactions--Vol. 20, No. 1--to be mailed during the first week in June. The next two issues (Vol. 20, Nos. 2 and 3) will contain the Record of the 1977 Conference on Scientific Journals. PC members are asked to submit and solicit papers for future issues.

3. Ron Blicq reported by mail on enrollment in "Technically--Write!" and plans for Fall workshops on "Technical Communication and Report Writing."

4. Francis Leib suggested and Bert Pearlman moved that PC establish an Award of Merit for quality communications printed in IEEE publications. The motion was passed and the Award will be established.

5. More than 200 copies of M. F. Buehler's Report Construction had been sold by May 1, and almost 6000 of R. M. Woelfle's Guide for Better Technical Presentations.

6. Richie Robinson has drafted a "questionaire" to be printed in PC's Newsletter. It will enable PC members to identify themselves as being

a. able to apply writing or teaching skill in a particular branch of engineering, and
b. interested in using this double talent to help the IEEE Staff or other groups with special projects.

7. Tom Patterson proposed that certain revisions be made in PC's Constitution and Bylaws. After further consideration by AdCom, these will be submitted for approval by higher IEEE authority and published in PC's Newsletter or Transactions for review by Group members.

8. Ron Eames is preparing "job descriptions" for PC officers and committee chairmen. Richie Robinson read a proposed list of duties for a new PC position--that of Area Representative. Ron will combine this list with suggestions from Pat McBride and Bob Woelfle.

9. It was suggested that existing PC "how to" booklets might be updated and reprinted. Emily Schlesinger will find out what is available.

10. Tom Patterson will obtain nominees for AdCom's next 3-year term, 1978-80. Names and biographies will be presented for review in August and election in the Fall.

11. The next two meetings of AdCom will be held in the East Board Room at IEEE Headquarters, 345 E. 47th Street, New York City, at 10 AM on

Friday, August 19
Friday, November 11

PC and other IEEE members will be welcome.

Technology vs Society:
Nuclear Energy

FRANCIS E. LEIB

Technology and society are at odds today, but the situation is not unusual. They have battled for centuries. If the hostility seems more intense now than ever before, this may be due to the increased rapidity and scope of technological change, the larger number of people whose lives are affected, and the louder, more widespread voice of public opinion.

Nevertheless, technology will survive and its developments will be adopted, as they always have been. Competition between individuals, companies, and countries encourage technological "progress"--even demand it. Society's problem is not how to destroy technology but how to live with it.

One of the most controversial subjects just now is energy -- more specifically, the production of electricity. In making electricity, one form of energy is changed to another. Commercially, large turbo-generators change the mechanical energy of water behind a

dam or in a river to the electrical energy of current in metal conductors. Where water is not available, the energy of pressurized steam is used--steam from water heated in large boilers.

There has never been enough water power to supply the needs of society for generating electricity, but in the past there seemed to be enough coal, gas, and oil to burn for heating any number of boilers and producing steam power. Now, however, gas and oil are becoming hard to get, and it seems wiser to "save" these fuels for such things as transportation and home-heating, where there are no suitable alternates. But coal is still abundant, and can still be burned to produce electricity.

On the other hand, deposits of coal are highly localized, coal is dirty, and any use of coal creates labor, safety, transportation, and ecological problems. For these reasons, society, as it calls for more and

more electric power, is also calling for a "better" and more "satisfying" fuel for the boilers of electric power plants.

To this two-fold demand, technology has replied by offering a "new" source of energy and new equipment for using it--energy released from the splitting of heavy atomic nuclei, and nuclear reactors in which this process is controlled. For just as the energy of coal, gas, and oil--the "fossil fuels"--can be changed to the energy of steam and then to electricity, so the energy of splitting atoms can be made to heat boilers, vaporize water, turn generators, and cause current to flow in transmission lines.

Thus there are now two readily available sources of energy which can be used to produce large quantities of electricity. Society, generally conservative, tends to favor the more familiar coal--despite the dangers of deep mining, the devastation of strip-mining, the cost of transportation, and the environmental degradation which results from by-products of coal-burning. Technology, on the other hand, favors nuclear energy because it is clean, efficient, and, so far, safe--despite concern over its potential for causing physical destruction, radioactive contamination, and genetic poisoning, and also despite still unresolved problems related to storing large quantities of nuclear waste which will be radioactive for longer than man has existed.

The opposition of society to the use of nuclear materials in making electricity is partly rational and partly emotional, but anti-nuclear forces show strong-minded determination. With only volunteer funding and organization, they continue to defy the privilege of government bureaucracy, the power of corporate mercantilism, the professional interests of engineers and technologists, and even increasing societal demands for electric service.

They have explained and supported their beliefs in a variety of published and broadcast presentations. They have taken legal "intervenor" action to protect public safety and prevent damage to the environment. They have also used political tactics.

Last year, through the efforts of anti-nuclear "activists," seven western States held public referendums of laws which would drastically curb the construction of nuclear reactors. The IEEE's Power Engineering Society, its Committee on Energy, and other professional and utility-based groups gave financial and promotional support to those who opposed these bills.

The proposals were defeated by two-to-one margins in five states and by three-to-one margins in the other two states, but anti-nuclear forces persist in their activity. Other states will hold similar referendums, and in some of the seven states there may be a second voting.

New questions have arisen, however, as for example the related argument against the proliferation of nuclear materials and technology that can be used to make bombs. But the argument against proliferation is, perhaps, largely wishful thinking. If only the technology that could be used to help solve our long-range energy problems did not produce a by-product that could be used for military or terrorist purposes! Such wishes are made fervent by recognition that there is not much difference between the nuclear materials that can make electric power and those that can make bombs.

Apparently, producing nuclear weapons is not difficult. To build a plutonium bomb, one needs only natural uranium and a small research reactor, plus some technological "know-how" that can be obtained from public documents. India, for example, a country with limited technological resources, detonated a "peaceful explosion" in 1974. Terrorists, on the other hand, might "short cut" this procedure by stealing nuclear weapons from defense depots or plutonium from chemical companies that have recovered it by processing spent nuclear fuel.

US companies control perhaps two-thirds of the world's "nuclear market," but Russia, Great Britain, France, West Germany, and Canada also export equipment that could be used for producing nuclear weapons as well as power. What could society gain by restricting US technology, or indeed the technology of any single one of these nations? The first three of these countries are already operating demonstration "breeder reactors" which can make power as well as new fuel by using "tails" from uranium-enriching plants. This technology is a step toward closing the fuel cycle by recycling valuable fuel materials.

Perhaps if society in the US had been more alert and protested more knowledgeably during the early development of nuclear technology, the proliferation question could have been avoided. Perhaps more would be known now about reprocessing spent nuclear fuel.

Nevertheless, we must not forget that during the bitter-cold winter of 1976-77, when fuel oil in the U.S. was scarce and natural gas was even scarcer, nuclear-fueled generation kept many jobs open, many needed services available, many houses warm, and many people fed and healthy.

Actually, no country could have held for very long an absolute monopoly on nuclear technology, nor can the U.S. very greatly delay the spread of such knowledge. Engineers work in other countries also, and companies strive for profits. Furthermore, all technology is perishable--ever being developed and ever improved or superseded. The growth of the nuclear industry can perhaps be slowed but it will not cease altogether.

And so we return to our first assessment of the conflict between societal and technical attitudes. Technology itself cannot be halted. Society can only adapt to technological "progress," taking care as best it can that this progress is not all-destructive.

Journal Conference

Max Davidson, Editor, of Madison, WI, wrote the following account of the IEEE Conference on Scientific Journals sponsored by PC and held May 2-4 at Reston, VA:

Question: Why should an editor from the Forect Products Laboratory, Forest Service, U.S. Department of Agriculture, attend meetings sponsored by IEEE, particularly when the subject is journals?

Answer: I attended because of the universality of the scientific journal and the far-sightedness of IEEE in promoting a series of inter-occupational, inter-disciplinary conferences.

I went to the IEEE Conference on Scientific Journals because I like the approach of mixing so many cooks--and ingredients--into a tasting of the broth of scientific journal issue. And the sharing of experiences proved as stimulating and valuable this year as it was at the earlier journal meetings in 1973 and 1975.

Two features stood out in 1977--the sensitivity session engineered by John Phillips and Anita DeVivo, and the assault on ignorance of the new copyright law.

The sensitivity session featured role-players who challenged their daily antagonists in the publication process. We heard everything--from the commercial publisher screaming at his editor for not providing enough manuscripts, to typical squabbles between copy editor, publications manager, middleman, and librarian. Ben Weil (representing the user) moaned at the mass of material thrown at him. Jim Lufkin, erstwhile teacher and author, exploded with an anguished cry, "Why all this mumbo-jumbo? Why all this haggling just to have my paper published so I can get my tenure!" And finally Earl Coleman (commercial publisher) observed sadly that "The rest of us get along rather well, except for author and user."

This role-playing session alone was worth the trip from Wisconsin to Virginia. The speeches of the players symbolized the reality of the whole conference. Although confrontations and antagonisms were acted out in fun, every comment came from frustrating personal experience and alerted those present to differences in points of view. The interactions even revealed why some changes take so much time and involve so many people.

The other outstanding feature may cause this conference to be remembered as the "Great Copyright Bewilderment." As I listened to a representative of the U.S. Copyright Office describe rights and limitations, fair use, reproduction by libraries, and exceptions, I understood an occasional word of English. When the next two speakers tried to clarify things, I realized that my hearing aid had been turned to Hungarian-Sanskrit. As I glanced around, others looked equally glassy-eyed and unbelieving. Only when Charles Lieb (Copyright Counsel for the Association

of American Publishers) began to speak did some points come into focus. This lawyer at least made me believe that I was understanding him.

In other sessions, and in the corridors between formal discussions, knots of people argued animatedly --if not always knowledgeably--about what "might" happen. At least storm warnings were posted, even though the extent of the hurricane might not be evident for some time, and aspects of the Conference in addition to the sensitivity and copyright sessions are still alive in my memory.

I recall the opening speeches, for example. Who isn't interested in what the next 10 to 15 years will bring? Probably few attendees agreed wholeheartedly with William Sutherland's glowing picture of future electronic magic. More of us, atuned to conventional publishing, nodded at Ben Russak's prediction that journals "will proliferate rather than decrease" and Paul Zurkowski's stressing that "economics will determine which way we go."

In other sessions, we considered the "state of the art" in activities related to publishing, and discussed ways of overcoming persistent problems. From the scheduled meetings emerged informal ones, in which most of us expressed ourselves freely on experiences, views, and biases, asking many a perennial "why?" Always the realization returned that none of us are alone in our questions and problems.

The commonality of problems emerged clearly in the session on editorial content, despite differences in disciplines and alleged ways in which various groups look at themselves and each other. With minor translations of terminology, the same concerns with audience, editorial control, refereeing, and reviewing were spelled out by speakers for medicine, the humanities, the physical and social sciences, and engineering. The comments apply to disciplinary publishing in many other areas also. Somehow human problems keep coming up, whatever the categories of people involved.

The '77 Conference on Scientific Journals was a success in that people from a wide range of jobs wholeheartedly and honestly attacked common problems together. The only difference I saw this year was the wider prevalence of deeper understanding that "other people have troubles too." Commercial publishers were speaking to librarians, and some forgiving souls even spoke to editors!

These, then, are the reasons that an editor of forest products research material was rubbing shoulders with communications people representing IEEE and publishers, editors, distributers, users, and librarians with a vast array of skills and knowledge. While most problems are re-hashes of old ones, who knows whom your answer might help, or whose answer might be your solution?

Pre-register me for 1979!

REPORT OF THE PROGRAM COMMITTEE,

1977 IEEE CONFERENCE ON SCIENTIFIC JOURNALS

AS REPORTED BY E. K. GANNETT

O W E D   T O   J I M   L U F K I N

(A l i a s   K i n g   J a m e s)

As our conference on journals comes to an end,

We should ask what we've learned; what does it portend?

We learned roses are red and violets are blue,

And that journals, like rosebuds, are in the red, too.

We saw publishers thinking their rights were inviolate,

But copying problems made them blue as a violet.

When librarians warned us of budget attrition,

They soothed us by calling it deaquisition.

Editors revealed that their referee capers

Were a Machiavellian way to lose papers.

We learned production technology that beggared
    description,

Even author-typed copy, known as decomposition.

We came with the fear that as computer use spread,

Journals and publishers soon might be dead.

But with new library networks and lending schemes,

Will librarians then replace the computing machines?

The copyright problem took on a new cast;

We found the ultimate answer at last!

We proved beyond doubt it's a law we don't need,

For our authors can't write and our readers don't read.

For all of this knowledge, for all that we've learned,

For this wonderful conference, there's one man who's
    earned

Our undying thanks. So let the cheers ring

To our Chairman, Jim Lufkin: Long Live the King!!

The most prominent requisite of a lecturer, though perhaps not the most important, is a good delivery.

The lecturer should give the audience full reason to believe that all his powers have been exerted for their pleasure and instruction.

--Michael Faraday

24th ITCC

The Society for Technical Communication (STC) has held another successful International Technical Communication Conference--the 24th, in Chicago, May 11-14. As usual, there was an impressive exhibit of technical art and publications; awards were given for high-quality entries in several classes of these two categories and for meritorious journal articles and STC Chapter newsletters.

Three PC-ers took part in the program. Craig Harkins, in the Graphics and Production Stem, gave a paper about multi-media presentations. Emily Schlesinger was a topic consultant in a session on "Revelation and Opportunity in Technical Writing." Dave Dobson organized and took part in two panel discussions--"What Writers and Editors Should Know about Production" and "What Graphics and Production Specialists Should Know about Writing and Editing."

Tom Patterson, scheduled to moderate a session on communicating through graphics, was isolated at his home in Massachusetts by an out-of-season, 12-inch snow--trees in full leaf and blossom were split and broken, automobiles were stranded, houses and gardens were damaged, electric and telephone service was interrupted; people shivered, went hungry, and failed to keep appointments.

Meanwhile in Chicago, after one chilly evening, ITCC registrants communicated and learned and enjoyed themselves in balmy, lake-side Spring weather. They

> listened to lectures
> took part in discussions
> ooh-ed and aah-ed at prize-winning technical art
>   and publications
> were instructed by demonstrations of printing
>   and typesetting equipment
> purchased books and brochures about technical
>   writing
> examined loose-leaf binders and art/graphics ma-
>   terials
> shopped in The Loop and at the Water Tower
> dined "on the town"
> strolled along Michigan Avenue.

A few, very late or very early, taxied to the Field Museum to see King Tutankhamun's treasures of gold, ebony, ivory, lapis, carnelian, and alabaster.

Special

Pat McBride has written letters of welcome to 100 new PC members. We hope to hear from some of you--here's another welcome! You live in all parts of the world. Let us know what you can do for PC and what PC can do to help you.

Area Representatives

Several PC-ers have asked for "jobs." It appears also that, within IEEE, the Group's image could be enhanced and its potential for service better realized through the work of individuals if some structure for single-person or small-group activity were developed.

A plan for having Area Representatives has accordingly been suggested, but AdCom's ideas on this subject are still embryonic. See item 8 in "AdCom Meeting" in this Newsletter. A proposed "job description" is as follows:

The Area Representative shall provide liaison between PC's AdCom and the PC members in his geographical area and field of engineering expertise. He shall represent PC in activities conducted by IEEE Chapters, Boards, Committees, and Professional Groups, as well as by other organizations with which PC is affiliated in the Council of Communication Societies. He shall promote PC membership within his area and help promote PC-sponsored activities.

There is nothing fixed or sacred about this list of duties. PC members are asked to comment, suggest specific activities that Area Representatives might perform, and volunteer for particular types of service.

One service that would be of great value is this: Attend conferences in various fields of engineering or conferences of communication societies in various localities and write prompt personal reports --for PC's Newsletter--from the point of view of a professional communicator.

For example, PC's President has already designated Jim Lufkin to represent her at the meeting of IEEE's Technical Activities Board in Minneapolis (Jim's home-town) in July. The Board will meet in San Diego in the Fall. Who can represent PC then, reporting to the President and through her to the Group via our Newsletter?

Who can represent PC at the Education Group's annual conference, "Frontiers in Education"? These meetings take place in a different State each year; one year, the Frontier was in England. PC members could "take turns"--visit the Frontier when the Education Group comes to your city, and make yourself known as a PC member. Then tell us about the conference.

Or, if you are a member of another IEEE Group's AdCom, ask about the possibility of interaction with PC's AdCom.

Or, representing PC, attend and report on a meeting like one of the following:

Conference and trade show of Industrial
  Graphics International
  San Jose, CA, June 28-30

Seminar on Creative Electronic Media
  San Fransicso, July 8-10

Conference of University Film Association
  College Park, MD, August 1-5

IFIP Congress '77,
  Toronto, August 8-12

Conference of the Linguistic Society of
  America
  Honolulu, August 12-14

Conference of IEEE Computer Society
  Washington, DC, September 6-9

NATO Symposium on Language
  Venice, Italy, September 26-30

This is only a partial list of conferences that PC-ers might like to attend--if close by--or hear about--if far away. For $6.00--annual subscription to Communication News--any PC-er can obtain a complete Meeting/Seminar Calendar, updated monthly for six months ahead. Or let PC's President know what you're interested in.

Who would like to be an Area Representative? Let PC's President know, and write your own job description for work in your own city, your own engineering specialty, or your choice of communication specialties.

Awards

PC has already established two means for calling attention to quality performance in professional communication.

The Alfred N. Goldsmith Memorial Award (placque) is given annually for service in support of Group purposes. First citations were made this year, when Jim Lufkin and Ron Blicq were honored for 1975 and 1976, respectively.

The Outstanding Paper Award (cash) will be given for the first time to the author of an article in PC's Transactions for 1977 (Vol. 20).

On May 20, PC's AdCom agreed to establish a third award--for quality coverage and presentation in the Newsletters of IEEE Groups, Societies, and Committees. Francis Leib is working out details for further action.

What ?

The controls established in this Section are adequate for the performance of the activity described in paragraph 8.7 provided they do not violate the requirements of paragraph 3.2 and meet the requirements of 4.3, however additional requirements can be established subject to the approval of Department Manager but in no case the controls established should fail to meet the requirements of ANSI N45.2 with the exception of Section 2.0 if the controls are for safety-related activities including but not limited to calibration services.

KNOW YOUR ADCOM

RONALD D. EAMES

Ron Eames, recently retired Manager of the Raytheon Company's Publications Department, has been a professional technical communicator for thirty-five years. His experience has ranged from writing through all phases of publishing and management. At Raytheon he was responsible for the activities of technical writers, editors, artists, photographers, and administrators; for production, audio-visuals, and training.

Particularly interested in encouraging young persons, Ron taught technical communication at Rensselaer Polytechnic Institute, Tufts University, and Emerson College. As a member of IEEE, he has presented papers at technical conferences throughout the country. One of the founders of the Society for Technical Communication, he holds the honorary grade of Fellow in that organization. He was a member of the original editorial board of Raytheon's engineering journal, Electronic Progress, and chaired the Maintenance Advisory Committee of the National Security Industrial Association (NSIA) which gave him its "award of merit" for outstanding service to U.S. defense.

Ron was educated in engineering, communication, and modern business management at the Massachusetts Institute of Technology, Massachusetts Radio School, and Boston College.
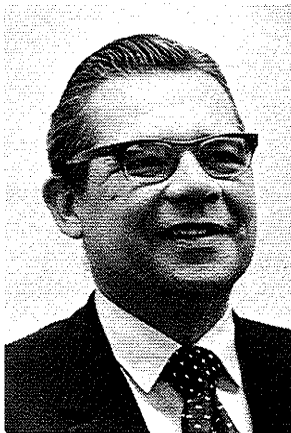
PLEASANT H. McBRIDE, JR.

Pat McBride just recently joined the PC Group but he has long been a professional communicator. For sixteen years he managed the Technical Information System of General Electric Company's Advanced Technology Laboratories in Schenectady, NY. He directed the preparation of technical reports, advertising and sales literature, and proposals, and as "Dean" of the instructor corps of GE's nationally-given "Effective Presentation Course" he coordinated the preparation of texts and teaching guides for training business communicators.

At present, Pat is a Vice President of the California-based Informatics Information Systems Company. He manages the operation of NASA's Scientific and Technical Information Facility in Washington, D.C.

Pat received the BSEE from the University of Miami (Florida) and took graduate courses at Union College in Schenectady. Having joined the IRE and the AIEE in 1950, he has been a Senior Member of IEEE since its formation. He is also a member of the Association for Computing Machinery.

As PC's Membership Chairman, Pat has recently prepared a promotional brochure for the Group and sent a copy, with a letter of welcome, to each of 100 new PC-ers.
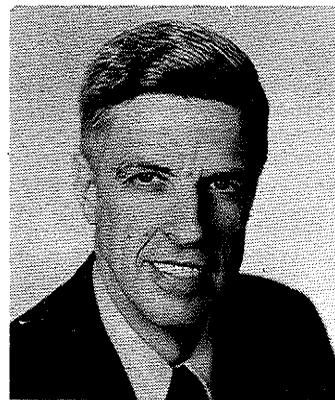
GEORGE F. McCLURE

George McClure has been active in professional societies for over 20 years. He joined the IRE in 1957 while serving as an instructor in the Department of Electrical Engineering at the U.S. Naval Academy. A member of the Vehicular Technology Group since 1963, he organized the Orlando VT Chapter in 1974 and served as its first chairman. At the 1974 National Electronics Conference, he served as organizer and chairman of a seminar dealing with expanded services and opportunities in mobile communications.

In 1975, George chaired a technical session at the International Conference on Communications (San Francisco) devoted to radio paging and reporting systems. In the same year, he was appointed Editor of the IEEE Transactions on Vehicular Technology and named Engineer of the Year by the Orlando Chapters of both the Communications Society and the Vehicular Technology Group. He was chairman of the 1977 Vehicular Technology Conference and is a member of IEEE Oceanic Engineering Council.

At present, George is Manager of Advanced Programs for Navy Communications and Electronics Systems at Martin Marietta in Orlando, Florida. He has been involved with communication systems for the past 15 years, dealing with applications to commercial and

military activities, including mobile telephone, emergency medical-service communications, and military tactical communications. Before joining Martin Marietta, he was responsible for developing high-speed printers and other display products for Radiation, Inc.

George received the degree of Bachelor of Science in Electrical Engineering in 1954, and the degree of Master of Science in Engineering in 1961; both were awarded by the University of Florida. He has published in Telecommunications, Telephony, Signal, and IEEE Transactions. A member of the Audio Engineering Society and a Senior Member of IEEE, he belongs to seven IEEE profressional groups.

JANE E. SWANSON

Jane Swanson has been Corporate Legal Administrator for Environmental Elements Corporation in Baltimore, Maryland, since December, 1976. She serves the Vice President for Sales and Group Operations and various product managers as consultant on legal, financial, and business procedures. She also performs liaison with outside counsel in litigations, negotiations, and trial preparations.

Jane has held various positions with several different companies, including Senior Staff Administrator for Computer Services Corporation; Senior Technical Editor for Vitro Laboratory; Publications Director for Operations Research, Inc.; Technical Writer/Editor for Booz-Allen; Information Services Manager for Canalco, Inc.; and Assistant Marketing Director for Capitol Radio Engineering Institute. Her activities ranged from the preparation of promotional materials for direct mail and radio "spot" advertising to the management and administration of presentations and reports for a multimillion-dollar Navy program.

Jane received the Bachelor of Arts Degree in English Composition and Biological Services from Pennsylvania State University in 1960, and the Doctorate of Law degree from the University of Baltimore School of Law in June, 1977.

A member of PC's AdCom since 1975, Jane is also a member of the Society for Technical Communication, the American Bar Association, and Toastmasters International.

Standard Scientific Conjugations

I am engaged in basic-device research.
Your work is product-oriented.
He develops gadgets.

I use a semi-quantitative argument.
You wave your hand.
He makes a wild guess.

I use a rigorous derivation.
You put in all the arithmetic.
He blinds everyone with science.

My theory fits all well-established experimental data.
Yours has a lot of adjustable parameters.
His is full of unwarranted, ad hoc assumptions.

I include all the relevant details.
You are inclined to pad your paper.
He puts in everything but the kitchen sink.

I write concisely.
Your paper is hard to follow.
His is obscure and full of jargon.

My results disprove the existing theory.
You should repeat your experiments under controlled conditions.
He uses MKS units.

I use sophisticated instrumentation.
You have racks and racks of equipment.
His work gets lost in a maze of black boxes.

I publish preliminary data on an exciting discovery.
You rush into print with half-baked ideas.
He is turning science into a rat race.

I make a feasibility study.
You do some quick-and-dirty experiments.
His work is slapdash.

I have a fertile, inventive brain.
You write down everything that comes into your mind.
He is completely lacking in self-criticism.

I publish sparingly.
You don't seem to have much to say.
He is bone-lazy.

I have a first-order theory.
Your treatment is oversimplified.
He makes crude approximations.

I make a detailed study.
You research the hell out of the subject.
He concentrates on trivialities.

I abandon an unrewarding project.
You are finding the problem a bit too much for you.
He has been wasting his time for years.

—Anonymous in Newsletter of Election Devices Society (March 1977)

PC's *Transactions*

The Transactions on Professional Communication is one of the means by which the IEEE Group on Professional Communication is trying to achieve its newly-defined goals of (1) helping engineers improve their communication skills, and (2) informing them of new ideas and methods in communication. We hope to make the Transactions a progressive source of pragmatic as well as thought-provoking material that will assist engineers in putting forth professional communications rather than just reports of professional work.

The Transactions will include (a) "how to" (e.g., examples, guides, reports of experience) on a wide spectrum of oral, visual, and written forms of communication; and (b) analysis, commentary, exposition, and theory on diverse aspects and means of communicating. Category (b) is intended to help the engineer-communicator broaden his perspective by bringing to his attention communication-related projects, systems, and techniques from the "outside" world.

One may claim, with some justification with respect to papers of type (a), that all has been said before. Fair enough--many books and papers have been written and university-level instruction is available. But we believe that our purpose will be served by focusing on troublesome aspects (of, e.g., technical writing) and specialized forms and media of communication, and by making easily remembered points through clear and succinct writing, with examples, "rules," and sometimes humor. Selective reprinting from a wide variety of publications, often those with specialized circulation, will be used to further this aim.

Next to conversation (and TV?), the printed word is probably the most used medium for conveying information. When it comes to technical information, hard copy has the valuable quality of being reviewable. It also provides additional information capacity through the visual cues of upper and lower-case letters, special characters and symbols, parentheses, punctuation, varied fonts, structure, and graphics.

As we well know, however, getting the words on paper is no guarantee of communication. The advantages of "paper" are often subverted through incorrect use of its features (visual cues), poor use of language, lack of organization, etc.

> "At least two-thirds of the unread-
> ability of the average technical
> report is due not to unavoidable
> sophistication but to casualness.
> An expert writing for other experts
> in the field can organize his ma-
> terial poorly, express himself bad-
> ly, avoid deciding what his basic
> assumptions are, and still be read
> with interest because [those other
> experts] can almost unconsciously
> supply what is missing. To reach
> a wider audience he need not 'write
> down'; he need only write better."
>
> (Editorial comment by Sydney Fair-
> banks, NSA TECHNICAL JOURNAL, Vol. 1
> No. 1, April 1956; italics added).

The first issue of Volume 20 of the IEEE Transactions on Professional Communication focuses on technical writing--communicating technical information via printed documents. The second issue will be the Record of the IEEE Conference on Scientific Journals, held in Reston, VA, May 2-4, 1977, under PC sponsorship.

--Rudy Joenk, Editor, PC Transactions

In Praise of Quality

PC Reporters Richie Robinson and Bert Pearlman see the Newsletters of other IEEE Groups regularly and will comment on their contents from time to time in our Newsletter. We will also review the Newsletters of constituent members of the Council of Communication Societies.

All PC-ers are invited to send notes on other newsletters or on articles in the various IEEE Transactions or other journals that seem of special merit or may be of interest to Group members. When you read--or hear--a professional communication of high quality, take the time and make the effort to call attention to it. Good work should be admired and advertised--and where better than in PC's Newsletter?

Computer

The April issue of Computer, monthly magazine of IEEE's Computer Society, features six articles on simulation, with two white-faced mimes--Sad and Happy --on the cover and in various poses inside. Simulation, readers are told, is a method of testing proposals without risking the penalties of actual trial, but they are also told many things about simulating with computers.

In a separate article which is probably of greater interest to non-computerists, Robert A. Kahn writes about visitor/computer interaction as a community resource. His discussion is called "Public Access to Personal Computing: A New Role for Science Museums."

Most museums and science-technology centers already use computers for research, data processing, record keeping, scheduling, and control, but quite a few use them in educational programs also. The Chicago and California (Los Angeles) Museums of Science and Industry, for example, the Franklin Institute (Philadelphia), and the Fernbank Science Center (Atlanta) demonstrate the use of computers to special classes or workshops of children.

At the Children's Museum in Boston, visitors can play with calculators and press switches to play games, construct pictures and patterns, simulate scientific situations, or obtain information about the time, local weather, etc.

At the Lawrence Hall of Science (Berkeley), visitors may both attend demonstrations and operate computer terminals.

The next level of computer use by museums is provision for access by the general public. Lawrence

Hall of Science and the Boston Children's Museum already offer time-sharing service with use of library or personal programs, computerized game-playing, and access to such computer-controlled devices as voice synthesizers, graph plotters, tone generators, and an electro-mechanical "turtle."

Computer classes are available also. The Franklin Institute teaches children how to write computer programs; the Oregon Museum of Science and Industry (Portland) and the Fernbank Center teach teen-agers and adults. Lawrence Hall of Science teaches programming too, but also "creative play" with computers, computer science, and uses of the computer (in business, education, art, science, law enforcement, and so on).

Kahn rounds off his article by posing questions about ideal and future public access to computers and appends a 16-item bibliography. He directs the Computer Education Project at Lawrence.

*　　　*　　　*　　　*　　　*

The May issue of Computer features five articles about stack computers, or machines which operate on the principle of last-in/first-out, like the puzzle called Tower of Hanoi." Well-known and generally available, the Tower consists of three pegs mounted on a base. A set of pierced disks, graduated in size, are placed on one peg so that each disk is larger than the one above it. The object of the puzzle is to move the tower--i.e., all of the disks--to another peg, one disk at a time, in such a way that no disk ever rests on one smaller than itself.

*　　　*　　　*　　　*　　　*

PC-ers may further explore details of simulation and stack machines as interest urges. The two feature series are mentioned here as pertaining to that new tool of communication, the computer; Kahn's article describes uses of this tool--to amuse and to educate--that may affect all of us.

The editor of Computer is True Seaborn.

More and More Writing

More scientists and engineers are writing more articles about their work, and this trend of increasing will continue at least through 1980. So says the National Science Foundation.

The total of 106,000 scholarly scientific articles published in 1960 grew to 151,000 in 1974 and may be up to 169,000 in 1980. The greatest increase has been in the number of papers about the environment, with computers as the next most-written-on subject.

Corresponding figures for technological books are 3,000, 14,000, and 17,000.

When you write, PC-ers, write better.

"Read It Aloud"

In Quality Progress for April 1977, Della Whittaker urges that we read our technical reports and articles aloud, to ourselves, as an early step in editing. She explains how private oral reading can help us check on completeness, catch up inconsistencies, and smooth out language.

"The art of storytelling need not be relegated only to actors, librarians, and mothers," she suggests. "Engineers, too, can tell their stories so that readers and listeners will listen for facts and be pleased by expression."

Dr. Whittaker is an editor at the Harry Diamond Laboratories, a U.S. Army research and development facility. She is also an instructor for PC's home-study course, "Technically--Write!"

USRI

In the IEEE Communications Society Magazine for March, 1977 (ed. F. S. Hill), an article by R. E. McIntosh explains the organization and aims of URSI. This group (l'Union Radio-Scientifique Internationale) is one of 17 Scientific Unions formalized during the Constitutive Assembly of the International Research Council in 1919. The research Council is now called the International Council of Scientific Unions (ICSU).

URSI, organized to promote the "scientific study of radio telegraphy," now concerns itself with international cooperation in study, research, development of methods and standards, and dissemination of publications related to the scientific aspects of telecommunication. This interest covers the use of guided and unguided electromagnetic waves, including both active (e.g., radar) and passive (e.g., radio astronomy) transmission systems.

Nine URSI Commissions deal with such specialized technologies as those of Waves in Plasma, Electromagnetic Metrology (standards), and Wave Phenomena in Nonionized Media. The Commission on Signals and Systems, of most interest to the IEEE Communications Society, is active in work on communication systems and system theory (including circuits), information theory, and signal processing.

Knowledge is one. Its division into subjects is a concession to human weakness

　　　　　　　　　　　　　　--H. J. Mackinder (1887)

Engineering Ethics

Some of the articles sent recently to members of IEEE's Engineering Management Society by its Review editor, Irwin Gray, make points which may relate the work of some PC-ers.

The Engineering Management Review is a reprint journal. In the March issue, "The Link between Customer and Engineer" by R. E. Herzog (from Machine Design, 1974), discusses what engineers should know about marketing. He says that when engineering and marketing personnel work together in customer-oriented teams they can develop better and more saleable products.

The same issue of the Review contains also another article from Machine Design (1968)--"You Need 'Overkill' in Communication" by R. M. D'Aprix. This author describes an effective administrator as one who understands how he can contribute to moving his company toward its goals and who explains patiently and persistently what he is doing and why.

In a section of the Review devoted to self-development, an anonymous author (reprinted from Consulting Engineer, 1975) writes "I Gave Up Ethics--To Eat." His specialty as a professional engineer "on his own" is the design of public works (highways, etc.) for governmental clients (counties, etc.). In the course of starving for two years, he says, he learned to practice "political engineering."

"I took the position," the article continues, "that, as an engineer dealing with governments, I must wear two hats and cloak myself in two separate codes of ethics. One code applied to the engineering aspects of my work, another applied to my business behavior. By the development of this schizophrenic professional personality, I could secure work under one code of ethics and then perform it under another. I hungrily adopted this philosophy."

Anonymous discusses commission agents, campaign contributions, "competitive" bidding, and "social activities." He tries, in his technical work, to compensate for his low business eithcs--"I have saved taxpayers more money than they will ever know, and I have many projects of which I am, as an engineer, rightly proud."

He is not, however, proud of his dealing with commission agents, and wishes that political engineering could be done away with. "But I don't like starving," he concludes. "I tried it."

With this anonymous article, the EM Review reprints two replies (also from Consulting Engineer, 1975), one by R. E. Mayer and one by C. M. Stanley. The former considers the engineer as a professional-- one who acts with competence, responsibility, and freedom--and defines professional ethics as "the obligation that the possessor of professional skills feels toward his client and the public."

Three quotations printed with Mayer's article are reprinted as "fillers" in this Newsletter.

Social Conscience

Technology and Society is the new name of the quarterly Newsletter of IEEE's Committee on Social Implications of Technology. The editor of this "meaty" and important publication is Frank Kotasek Jr.

T&S accepts submitted papers on various society/technology interfaces and also publishes reports of the Committee's Working Groups on Ethics, Education, Ethics/Environment, Systems Engineering, Information Technology, and Crime Countermeasures.

Every issue of T&S contains articles on subjects that all engineers--and in many cases their families-- should feel concerned about. In March, for example there was a history of CSIT and discussions of nuclear power, computers and public policy, and National Science Foundation programs on ethics in science and science for senior citizens. Published letters to the editor argue and inform about engineers and Chilean politics, the need of Vietman and Zaire for technical journals and information, systems engineering applied to societal problems, and a university Center for studying professional ethics.

Any PC-er who would like to receive Technology and Society should send his/her IEEE membership number with a request to Ms. Joan Breslin, IEEE, 345 E. 47 Street, NYC, 10017.

Science without conscience is but death of the soul.

--Montaigne

Diversions

The Information Theory Group's Newsletter for March 1977 contains several items of interest to non-IT members.

Editor Lalit Bahl's Competition No. 2 invites readers to compose a limerick rhymed on the name of a mathematician, engineer, or scientist (two samples are given).

Neil Sloane's Puzzle Column No. 5 suggests that readers try to represent the numbers from 1 to 20 by using only the digit 4, as infrequently as possible, with any kind and number of mathematical operators $(+, \sqrt{\ }, !$, and so on). For example,

$$4 \div 4 = 1, \sqrt{4} = 2.$$

Smallest total number of 4's wins! Try it, PC-ers.

In David Slepian's IT Double Acrostic No. 1, "technical" words and definitions conceal a "technical" quotation.

Electronic and Otherwise

Editor Mike Driver enlivens the Newsletter of the Electron Devices Society with cartoons, zig-zag spacers, and other non-electronic devices. He editorializes from the "Driver's Seat" and heads the report of the EDS Standards Committee by picturing a flag and printing each letter of the title, STANDARDS, from a different type-font.

Other headlines are more consistent, except that no two are set in the same style of lettering. News of EDS sub-groups is called "Paging the Chapters." Items from the Far East appear as "Japanews."

Other items of interest to the un-electronic are the contributions of Jayne Partridge, who composes limericks and provides "Wreliability Writings" on "The Meanest Time Between Failures." Some of her definitions are as follows:

Failure Analysis--how to tear things apart without having to put them together again.

Failure Mechanisms--a description of how things don't work.

Normal Stresses--where if you built the part right in the first place, nothing would fail.

Lot/Part Acceptance Criteria--or how to increase the price of the part so the government can affort it.

Reliability State--or how to predict failure rates without knowing anything about the parts.

Confidence Level--a measure of how uncertain you are about the positive statement you just made.

A Yankee Leonardo

The May 1977 issue of Scientific American advertises a 20-minute filmstrip/tape-cassette presentation for use with DuKane projectors--the story of Rufus Porter, A Scientific American. Porter was a nineteenth-century artist, inventor, and journalist. In 1845 he founded Scientific American; before 1850, he demonstrated a self-propelled flying machine; his murals have been called treasures of American art.

The audio-visual package uses Porter's words and pictures. It is recommended for high school classes in history, social studies, and art, but might be of interest to groups of adults. To obtain a copy, send $22 (plus sales tax if appropriate) to

>   Scientific American, Dept. RP
>   415 Madison Avenue
>   New York, NY 10017

A return-and-refund privilege is offered.

Newsletter Briefs

Beginning in 1978, the Manufacturing Technology Group and the Parts, Hybrids, and Packaging Group will operate together, merged as the Components, Hybrids, and Manufacturing Group.

*   *   *   *   *

In its second year of publication is The Women Engineering Students' Newsletter, sponsored by IEEE's Committee on Professional Opportunities for Women (COMPOW). The most recent issue contains news of the professional organization WISE (Women In Science and Engineering), of college groups formed to promote the interests of technical-minded women, and of courses, workshops, conferences, and books for and about women engineers and engineering students. Also in this Spring issue are accounts of the personal experiences of two women, one a graduate student in nuclear engineering at Purdue, the other a co-op engineering student at Detroit Diesel Allison Division of General Motors. Violet B. Hass is the editor.

*   *   *   *   *

The back and front covers of the Reliability Group Newsletter for April are given over to "Reliability Victory Song" by Bob Stewart. The composition is written for voice and piano--the music a "catchy" march, the verse an ironic celebration of "failure's victory": reliability appears uncertain, statistics measure ignorance, and failure triumphs because of cold solder joints, broken leads, and guesstimating.

*   *   *   *   *

The April Newsletter of the Engineering in Medicine and Biology Group (ed. Ted Young) contains information on workshops, attitudes and legislation about medical devices. The document "Good Medical Practices" published in the Federal Register (March 1, 1977) proposes umbrella regulations for manufacture and sets up two categories--critical or life supporting devices like pacemakers and respirators; and non-critical devices like bedpans and crutches. Researchers, manufacturers, physicians and other medical specialists, engineers, patients, and the general public are concerned for the final form of the regulations, standards, and prescribed methods of compliance.

*   *   *   *   *

The March issue of The IGI Graph-a-gram, newsletter of Industrial Graphics International, is composed in a delightful assortment of type faces and sizes, boxed items, and illustrations. Every article is set differently, boxes are outlined in several ways, there are half-tones, cartoons, lists, and tabulations. The good assortment of material is printed on 12 pages of heavy orange-cream stock which a printer's notice calls "India Carnival Offset 70#." Editor Nancy Hogan has used visual variety very successfully as a unifying device.

An intellectual is someone whose mind watches itself.

--Albert Camus (1935)

Call for Papers

This is a message from Rudy Joenk, Editor of PC's Transactions:

It is going to take a while before the outside world recognizes that the PC Group is on the way up--and therefore inundates us with manuscripts from which to pick and choose for publication in our Transactions. I would greatly appreciate your help in compensating for this hiatus, and have three requests for near-future action:

1. A reprintable paper--something from a specialized or controlled-circulation publication that you have really found interesting or useful and would want to see in your Transactions.

2. Discussion of the Copyright Act--lucid exposition and opinion on the new law, its implementation, the "fair use" provision, and clearinghouse/payment centers. These might be "learned" interpretations, the library point of view, academic and industrial policies, white papers, etc.

3. An original manuscript--steer an author of your acquaintance to the Transactions; give me specific information on communication work in progress somewhere so that I can write knowledgeably to a particular potential author; write a Transactions-worthy paper yourself.

50 Years of TV

In the April issue of Communication Notes, monthly newsletter of the Council of Communication Societies, Editor Fred Capshaw comments on television's fiftieth anniversary, April 7. He sees the medium as both venerable and vital.

Commercial TV brings news, records history, and provides a variety of instruction and entertainment. Its less attractive aspects are excessive portrayal of violence, "inane and insulting" advertisements, pandering to low taste, and venality--money and "ratings" seem more important in and to the industry than quality.

On the other hand, with presentation of the series Roots and the spectacular Jesus of Nazareth, TV dared to "affect people's minds for the better." The series 60 Minutes and The Fire Next Door examine matters of social importance. Little House on the Prairie, The Waltons, and All in the Family portray characters who are aware of the value of honesty, discipline, integrity, and love.

The TV industry is also beginning to respond to criticism from the public and to provide educational services, and, saving the best for last, the Public Broadcasting System is a joy.

Happy Birthday, TV!

Walking

A Random Walk in Science, comp. R. L. Weber, ed. E. Mendoza. Published in London by The Institute of Physics and in New York by Crane, Russak; 1973, 206 pp., $12.50.

A Random Walk is a reprint collection of light-hearted articles, poems, brief quotations, and "funnies" in prose and picture--composed by scientists and related to science. Via its pages, "New SI" and "Writing Kit" came to this issue of our Newsletter. Other tid-bits from the same source will follow.

Walk is a book to walk through at random. It contains, among other things, a calculation of temperatures to show that Heaven is hotter than Hell, an article on zipperdynamics, a discussion of the uses of fallacy, a physical theory of ghosts, and an account of "Life on Earth" by a Martian who sees automobiles as our planet's living inhabitants and human beings as negligible parasites.

A Foreword suggests the subtitle, "Physicists at Play," but there is much in Walk to interest engineers. One article, from the IEEE Students' Quarterly Journal of 1955, describes a turboencabulator which was sucessfully used for operating nofer trunnions and, with a drawn reciprocating dingle arm, for reducing sinusoidal depleneration.

A Random Walk is a great book by many great authors. Try it!

Membership

This booster has recently appeared in several versions; ours has a PC twist.

Are you an active member, the kind
  that would be missed?
Or are you just contented that
  your name is on the list?
Do you attend our meetings? Do
  you support our crowd?
Or do you, rather, stay at home,
  complaining long and loud?
Do you help with PC projects? Do you
  come and take your pick,
Or let the work be AdCom's job,
  and talk about the Clique?
PC is planning projects that will
  be great--when done;
And all these can be finished
  with the help of everyone.
So think this over, Member. Which
  is right and which is wrong:
Are YOU an active member? Or--
  do you just belong?

Editing

A <u>Practical</u> <u>Guide</u> to <u>Newsletter</u> <u>Editing</u> <u>and</u> <u>Design</u>,
LaRae H. Wales, 1976. Iowa State University Press,
Ames, Iowa, 50010. 52 pp., $2.50 (payment required
with order).

This <u>Practical</u> <u>Guide</u>, an excellent production
manual, contains the basic information needed by in-
experienced editors of organization newsletters.

Material is clearly presented and illustrated.
Advice is given about choosing content (considering
the purpose of the newsletter), selecting and placing
stories, planning format, designing nameplates, and
selecting paper. Mockup and mailing are also dis-
cussed. Clear, concise writing and careful editing
are emphasized.

The author explains how to work with type, select
display faces, and translate typewritten lines into
typeset lines. She discusses headline design, effec-
tive use of photographs, and how to prepare a news-
letter for either mimeograph or offset reproduction.
Terms are explained in the text and in a glossary.
A reference section on stylebooks is included.

Managing

Two books are reviewed in the IEEE Engineering
Management Society's Newsletter for March/April.

Editor Irwin Gray recommends <u>Management</u> <u>Con-</u>
<u>sulting</u>, <u>A</u> <u>Guide</u> <u>to</u> <u>the</u> <u>Profession</u>, ed. M. Kubr,
1976, 368 pp., $17.95; obtainable from International
Labor Union offices in the US, Canada, UK, Ethiopia,
India, and Japan (addresses available from PC editor).
According to Gray's report, this book discusses roles,
"assignments," fees, self-development, and relation-
ships with clients--the basics of a home-study course
in how to become a management consultant.

Editor Gray also recommends <u>Everyman</u>'s <u>Prince</u>, by
William D. Coplin and Michael K. O'Leary, rev. 1976,
210 pp. $5.95; Duxbury Press, North Scituate, MA. The
review explains briefly the authors' "game plan" for
applying in modern life the concepts set forth by the
Renaissance Italian, Machiavelli. In <u>The</u> <u>Prince</u>,
Machiavelli advocated the use of flattery and bribery
in solving "political" problems. Coplin and O'Leary
describe a system for recording, studying, and acting
on information to accomplish the same purpose--i.e.,
to serve one's self by modifying the behavior of others.

The new scheme consists of four steps:

1. <u>PR</u>obe to find key persons in your "political" situ-
   ation.

2. <u>IN</u>teract to get their ideas.

3. <u>C</u>alculate how to affect their behavior.

4. <u>E</u>xecute your plans.

In his review, Gray admires the authors' sugges-
tions for individual application of their system and
describes as a "masterpiece" their analysis of George
Washington's use of PRINCE strategy to manipulate the
Constitution of the U.S. into existence.

Writing

TODAY'S BUSINESS LETTER WRITING, Elizabeth M. Avett.
Englewood Cliffs, N.J., Prentice-Hall, 1977. Paper-
bound, 194 pp, $7.95.

TBLW, a book about formal business letters, is
written in the conversational style of informal social
letters. The instructions, samples, and exercises are
like friendly suggestions, pleasant to read and pleas-
ant to follow. The book itself is pleasant also to
look at: type faces are clear, print/space balances
are varied and attractive, and a single quizzical car-
toon character appears on many pages.

The author says that she wrote TBLW to help other
people write pleasantly--that is, easily (for them-
selves) and informatively (for others). Her success
will, of course, be the success of her readers in ob-
taining desired attention and action through letters,
but she has presented basic material with such persua-
sive originality that even casual students can profit
from following either her precepts or her example.

TBLW's first three chapters discuss such things
as preparedness for letter-writing, "the look of let-
ters" (an excellent discussion), tone, style, and
grammar. The next eight chapters discuss types of
business letter: request/inquiry, order, claim,
sales, credit collection, job-application, and person-
al. The twelfth and last chapter is a "crash course"
in report-writing.

Each chapter ends with lively exercises in gram-
mar, punctuation, spelling, or usage, followed by a
set of writing assignments or "Exercises in Communica-
tion." Some of the latter might even be called "Ad-
ventures" in communication. Appendixes contain a 12-
page guide to English usage and 58 pages of sample
letters.

TBLW can be used for self-help or class-instruc-
tion. The author's advice is good, her light-hearted,
serious-minded approach is appropriate and well-man-
aged. Experienced letter-writers will not be wasting
time if they read her book thoughtfully, and beginners
especially will benefit from following her practical
suggestions.

The engineer acts for public authority, he must protect
the public; no one else can perform the function.

--Thaddeus Merriman

Law keeps us from doing wrong. Ethics encourages us to
do what is right. Ethics is the positive approach to
human behavior.

--Bennis Meeks

The simple reason so many businessmen are involved in
politics is that politics is so involved in business.

--Allan C. Brownfield

PC's Writing Courses

About 100 "students" have enrolled in PC's home-study course, "Technically--Write!" and plans are being made to offer six workshops in "Technical Communication and Report Writing" between September 20 and November 10 in various cities:

1. New Haven, CT
2. New Brunswick, NJ
3. Washington, DC
4. Champaign, IL
5. Denver, CO
6. Los Angeles, CA

Exact dates and locations are not yet firm. Workshops 1, 4, 6, and possibly 3 will also be training sessions for the eight persons who have asked to be course leaders and who may teach Workshops 2 and 5. It is hoped that Workshop 4 can be held either just before or just after the Education Group's conference, "Frontiers in Education," which is scheduled for October 26-28 in Champaign.

Skill Survey

Because of the unique skills which many of our members possess, PC has often been requested to recommend someone who can assist the IEEE staff, or affiliated group, with some project with which they are involved (often in education, course preparation, etc.). Although the requirement is occasionally for an unpaid volunteer, many of the assignments carry remuneration. If you wish to be considered for such an opportunity, please prepare a SKILL SURVEY as follows and mail it to:

Mr. Richard Robinson
Grumman Aerospace Corp.
Advanced Development, Plant 5
Bethpage, L.I., NY   11714

Name
Home Address
Business Address
Position
  - Title/Company
  - Job Description (25 words or less)
Education (Degree, Major)
  1.
  2.
  3.
Other IEEE Group Memberships
  1.
  2.
  3.
Additional, Associated Education and Experience (Teaching, Technical Training, etc.)
  1.
  2.
  3.

New SI

The following "Reference Standards for Various Sundry Interconsequential Trivia" were established by Philip A. Simpson of the National Bureau of Standards Laboratories in Boulder, Colorado. "Volume I" appeared first in The NBS Standard (15; Jan. 1, 1970) and was reprinted with Volume II in a later issue of the same publication (19; May 22, 1974). Permission to share this work with PC-ers was given by the author.

Volume 1

10^{-15} bismol	1 femto-bismol
10^{-12} boos	1 picoboo
1 boo^2	1 boo boo
10^{-18} boys	1 attoboy
10^{12} bulls	1 terrabull
10^1 cards	1 decacard
10^{12} fires	1 terafire
10^{-18} girls	1 attogirl
10^{-9} goats	1 nannygoat
2 gorics	1 paregoric
10^{-3} ink machines	1 millink machine
10^3 jugs	1 kilojug
10^9 los	1 gigolo
10^{-1} mate	1 decimate
10^{-2} mental	1 centimental
1 no^2	1 no-no
10^{-2} pedes	1 centipede
10^6 phones	1 megaphone
10^{-6} phones	1 microphone
10^{12} pins	1 terapin

Volume II

10^{-18} misers	1 attomiser
10^{-3} tates	1 millitate
10^{-12} los	1 picolo
10^{-6} nesias	1 micronesia
1 large nesia	1 magnesia
100 female sheep	1 hectoewe
10 dents	1 decadent
10^{-18} tudes	1 attotude
10^{12} cottas	1 teracotta
10^{-2} nels	1 centinel
1 oh^2	1 oh oh
10^{-18} visms	1 attovism
2 docks	1 paradocks
10 gons	1 decagon
10^{-3} neries	1 millinery
10^{-1} duous trees	1 deciduous tree
10^{-6} cosms	1 microcosm
10^{-12} doors	1 picodoor
10^{-3} taries	1 millitary

Understand ?

Having laid it on the line to Storeroom personnel, it goes without saying that personnel who have to interface with them should recognize that while their emphasis may be different from theirs they are trying their best to meet Company goals.

Non-Metrication

Do exa, peta, tera, giga, etc., or atto, femto, pico, nano, etc., bother you? Think of these:

A. Cubic Measure

Liquid

Barrel of water - 31.5 gallons
            oil - 42.0 gallons
           beer - 31.0 gallons

Dry

Barrel of grain   - 105 quarts
         cranberries - 87 quarts

Problem: If 1 dry quart has the same volume as 1.1636 liquid quarts, is there a dry barrel?

B. Linear Measure - Land

1 statute mile* =   8 furlongs
              =   80 chains (survey)**
              =   176 chains (football)
              =   320 rods
              =   880 fathoms
              =   1 760 yards
              =   5 280 feet***
              =   7 040 spans
              =   8 000 links
              =   15 840 hands
              =   63 360 inches
              =   84 480 digits
              =   4 055 040 ounces****
              = 63 360 000 mils

* 1 Roman mile = 1620 yards but not 4860 feet, because
  1 Roman pace = 5 Roman feet but 4.85 English feet.

** The engineer's chain may be either 50 or 100 feet.

*** Philadelphia foot = 1.002 E-W, 1.0045 N-S.

**** The ounce, equivalent to 1/64 of an inch, is used in measuring the thickness of leather.

Problem 1: If the average horse is 15.84 hands tall, and if 1 statute mile = 15,840 hands, then does 1 statute mile = 1,000 horses?

Problem 2: If 1000 horses = 1 statute mile, how many sea horses = 1 nautical mile?

C. Linear Measure - Sea

1 British nautical mile = 6080 feet
1 American nautical mile = 6076.1155 feet
1 knotty nautical mile   = 6075 feet

If 1 knot = 47 statute feet, 3 inches, and nautical miles per hour = number of (rope) knots paid out in 28 seconds, then 1 mile = $\frac{3600}{28}$ x 47'3"
                      = 6075 feet

--From "Metrication Aids Education--and Vice Versa," a lecture given by R. W. Bemer (Honeywell Information Systems), to the National Council of Teachers of Mathematics, February 24-6, 1977.

Talk Better

Guide for Better Technical Presentations, by Robert M. Woelfle, may be obtained from

IEEE Press
345 E. 47th Street
New York, NY   10017

Prices are as follows: Paperbound, $7.95, to IEEE members only; clothbound, $11.95 to IEEE members, $15.95 to others. Send check with order.

This is an excellent collection of reprinted articles about how to present technical material to an audience--planning for effectiveness, perfecting delivery, using visual aids, etc.

Plan Better

Report Construction, by Mary Fran Buehler, may be obtained from

IEEE--PC
6411 Chillum Place, N.W.
Washington, D.C.   20012

Prices are as follows: 1 to 10 copies, $2.00 each; 11 to 25 copies, $1.90 each; 26 or more, $1.75 each. Send check with order.

This is a clear, concise, practical guide--not on how to write, but on how to "build" a structure for conveying technical information.

Write Better

Technically--Write!, the Home-Study Course now being offered by IEEE's Educational Activities Board and the Group on Professional Communication, features personal interaction. Mail completed assignments to your individual instructor, who will appraise the work and return practical comments. Specific attention and easy-paced teaching will help you advance from a partial grasp to confident control of writing techniques.

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