IEEE
Professional Communication Society Newsletter

Vol. 25, No. 1 January 1982 (ISSN 0161-5718)

Letter from the Editor

January is traditionally the time for taking stock—that is for looking both to the past and to the future. This January issue of PC's *Newsletter* is late, as most of the 1981 issues were, but our April issue is being planned along with this one and the two will be mailed within two weeks of each other, if all goes well. Perhaps the July issue will be "on time" and we will have "caught up."

Between 1976 and 1981, PC's membership grew from an all-time low of about 1200 to an all-time high of about 2200. In 1981, we had functioning chapters in London and Boston, and effort had begun to form one in Washington (DC). By 1981 also, PC's *Transactions* had grown to be a respected and useful quarterly, and our *Newsletter* had increasingly become a forum for contributions and articles from Society members.

Several other Society accomplishments and activities are worthy of note also. PC was responsible for the formation of the thriving Society for Scholarly Publishing, now in its fourth year. As an organizational member, we actively support the Council of Communication Societies. And, in a farther-reaching effort, we send representatives to the yearly meetings of the International Council for Technical Communication.

PC members form a mixed group. Half of us are engineers who recognize the importance of communication skills and of working to improve their own writing and speaking abilities. The other half are communication professionals who promote or are affiliated with engineering activities.

Our common interest, the basis for the existence of our Professional Communication Society, is our desire to define or identify the communication needs and problems of engineers and to find or suggest ways of solving these problems.

In pursuing this interest by taking active part in PC activities and urging colleagues to do so too, engineers and technical communicators can improve the general quality of articles and speeches on technical subjects and the particular quality of the documents and presentations for which they are individually responsible.

AdCom Meeting

PC's AdCom met on December 11, 1981 at IEEE Headquarters in New York City. Announcements, discussions, and business were as follows:

1. PC membership remains about 2000.
2. Original and reprint papers on Communication are needed to keep PC's *Transactions* a useful publication. Society members are urged to write, solicit, and send copies of articles to our editor, Dr. R. J. Joenk, Dept. 588, Bldg. 022-1, IBM Corporation, P.O. Box 1900, Boulder, CO 80302.
3. Pat Chaffee was appointed to fill Joe Chapline's unexpired AdCom term.
4. Ron Blicq, Pat Chaffe, and Jim Hill, as a committee, will strengthen the IEEE/PCS relationship with ABET (Accreditation Board for Engineering and Technology).
5. Jim Lufkin and Dave Forrest are possible nominees for election to AdCom (1983-6). PC-ers are urged to suggest other names to T. T. Patterson, GTE Labs., 40 Sylvan Road, Waltham, MA 02154.
6. John Wilhelm (IEEE Educational Activities Board) suggested some marketing strategies for promoting PC's workshop and home-study course, *Technically—Write!* Arrangements will be made for a staff member of *The Institute* to report on an interview with Ron Blicq, author of the textbook, *Technically—Write!* Ron Blicq, Harry Moore, and Bob Woelfle were asked to act as a committee on marketing.
7. For information about PC's annual college scholarship ($1000), communicate with Dr. Della Whittaker, 10804 Ashfield Road, Adelphi, MD 20783.
8. Revision 5 of PC's Constitution and Bylaws was approved. The most important changes were clarifications of the provisions for Affiliate Member and for the nomination and election of AdCom members. A copy will be sent to all PC members, in one or more issues of the *Newsletter*.

New AdCom Member

Pat Chaffee, newly-appointed Secretary of PC's AdCom, lives by the editor's blue pencil and the actor's greasepaint. During the day, she edits software documentation for OAO Corporation in Hampton, Virginia. In the evenings, she becomes a "mature woman" in community theater productions—a bossy maid, perhaps, or a lonely Navy wife, or the leader of a Greek chorus.

Pat has always had greasepaint for blood, but she came to the blue pencil after ten years of teaching college English, first in Tuscaloosa (Alabama) and then in Norfolk (Virginia). She received her PhD in English from Indiana University and has published several articles of literary criticism in scholarly journals. Her latest eassay, "Human Engineering and the Technical Editor," will appear in a forthcoming issue of *The Technical Writing Teacher.*

In addition to OAO Corporation and Community Theater, the Norfolk-Virginia Beach Chapter of the League of Women Voters also claims part of Pat's time and attention—she is now its Vice-President and the editor of its bulletin.

New PC-ers

Welcome to those who joined PC in the last three months of 1981—146 from the United States, 24 from Canada, and 22 from all over the world! Of the total 192, at least 15 are women; in the past, only two or three women have become PC-ers during any three-month period.

Australia
Edwards, W. J.
Guttmann, P. T.
Jones, G. M.
Shmith, G. K.

China
Shaw, Y. Z.

England
Chapman, P. J.

Hong Kong
Fu, S. C.
Yeung, P. S-M.

India
Roy, S. B.
Shah, D. M.

Italy
Furia, L.

Japan
Miyashata, K.
Nakata, K.

Mexico
Flores-Morfin, J.

New Zealand
Fisk, K. R.

Peru
Arambulo, C. D.

Saudi Arabia
Khan, S. A.
Tariq, M. H.

Sweden
Vrethem, A. T.

Switzerland
Vollenweicher, W. W.

Venezuela
Suarez, R. A.

West Germany
Moeller, W. J.

CANADA

Alberta
Marshall, B. W.

British Columbia
Ell, S. L.
Lunscher, W. H.
Stuart, D. C.

Manitoba
Toms, N.

Nova Scotia
Hazen, D. G.
Redmond, B. T.

Ontario
Bain, P. D.
Bernard, E.
Chaudhary, A.
Costen, R. N.
Faulkner, G.
Jonkman, J. A
Leonhard, W. L.
Ng, P. P.
Ottewil, M. B.
Spencer, H.
Stamoulis, G.
Stoddard, I. A.
Tumiati, G. A.
Warmenhoven, H. G.

Quebec
Chinn, N. W.
Dubois, E.
Makela, L. J.

UNITED STATES

Alabama
Pinkston, W. J., II
Stephens, K. T., Sr.

Alaska
Rizvi, T. K.

Arkansas
Duplissey, D. A.

California
Barajas, S.
Benjamin, A. H.
Borschowa, L.
Brunstein, S. A
Cox, J.
Delfino, A. B.
Dick, M. J.
Ertel, M. M.
Fujiwara, S. K.
Gilheany, S.
Gottwald, C. H.
Goudey, D. A.
Greene, C. R.
Hall, R. E.
Hamilton, J. M.
Hirsohn, P.
Holmberg, K. G.
Justice, G. G.
Lapointe, J., Jr.
Lavendel, G. A.
Marshburn, T. E.
Martin, E. L.
Mortensen, F.
Osbrink, N. K.
Peck, D. C.
Rego, M. C.
Reid, B. K.
Riesberg, J. A.
Sehnert, P. J.
Shearin, E.
Tze-Hwa, L.

Colorado
Brown, S. C.
Fulton, T. B.
Haugen, M. A.
Mesenbrink, R.
Segura, E. B.
Walker, W., Jr.

Connecticut
Ash, J. I.
Cassady, T. J.
Degennaro, S. V.
Ryzewski, J. R.
Waite, D. R.

District of Columbia
Marandi, H. R.

Florida
Carver, M. A.
Dusing, D. D.
Erlich, R. S.
Grushka, J. L.
Jones, K. L.
Judge, F. W.
Poltz, R. W.

Georgia
Carter, W. E.
Fukuoka, H.
Hebert, J. J.
Okafor, A. I.

IEEE Professional Communication Society Newsletter is published quarterly by the Professional Communication Society of The Institute of Electrical and Electronics Engineers, 345 East 47th Street, New York, NY 10017. Sent automatically and without additional cost to each member of the Professional Communication Society. Printed in U.S.A. Second-class postage paid at New York, NY and at additional mailing offices. Persons and organizations receiving this Newsletter are welcome to circulate and reprint material from it. Please acknowledge the IEEE Professional Communication Society and the original sources cited.

Illinois
Axelrod, L. R.
Indiana
Henke, M. C.
Vincent, W. A.
Iowa
Seegers, T. L.
Louisiana
Cancienne, C.
Maine
Hudson, J. P., Jr.
Loisel, S. M.
Maryland
Brandt, D. M.
Rogers, M. W.
Werth, M. W.
Massachusetts
Bullen, R. H., Jr.
Coughlin, M. P.
Delbecq, J. M.
Henshall, R. T.
Kras, P. L.
Levis, A. H.
McGovern, M.
Pabst, R. A.
Walsh, R. J.
Michigan
Callahan, J. J.
Fitzgerald, K.
Ford, S. K.
Herubin, M. A.
Randall, C.
Minnesota
Fears, R.
Peterson, L.
Mississippi
Irwin, D.
Missouri
Sloan, G. L.
Nevada
Mosser, H. V.
New Jersey
Broido, L. G.
Carides, T.
Denny, F. R.
Herr, E. R.
Kenny, R., Jr.
Meo,J. A.
Raghuwanshi, P. M.
New Mexico
Lundy, A. S.
New York
Ballard, N.
Conners, J. D.
Councill, C. D.
Epner,N.
Gordon, P. L.
Green, W. F.
Langlois, C. S.
Paige, T. L.
Rhim, D. W.
Stocking, M. A.
Tredennick, H. L., III
Willey, J. J.
Noth Carolina
Brannock, M. D.
Gottschalk, K. D.
Wu, C.
North Dakota
Leong, Y. M.
Raatz, D. D.
Ohio
Felkey, M. A.
Heathcote, L. J.
McCaskey, J. P.
Mounce, C. O.
Myers, W. F.
White, A. W.
Oklahoma
Guthrie, T.
Shurtleff, J. M.
Pennsylvania
Amos, H. R., Jr.
Baddorf, D. L.
Baker, G. W.
Bedford, M. S.
Frankel, S. N.
Helmick, R. A.
Olson, C.
Stape, W. J.
Venable, T. L.
Witkowski, S. D.
Tennessee
Alexander, S. T.
Ashmore, R. L.
Brown, S. D.
Texas
Bootman, S. R.
Hennigan, K. B.
Ling, R. Y.
Virginia
Chaffee, P. A.
Ghassami, M. A.
Joseph, D. A.
Lennon, T. J.
Nau, R. S.
Stewart, B. S.
Vermont
Watson, W. C.
Washington
Fletcher, R. K.
Wisconsin
Froehling, P.
Saindon, S. A.

Clarification

Jan Broer, PC's representative to the 13th meeting of the International Council for Technical Communication (September 23–24, 1981, in Holland), has pointed out errors in the transcription of his report of the proceedings:

1. In Europe, though not in the United States, *Anne* is often used as a man's name. (The same situation exists for *Evelyn.*) Thus the pronoun *he* (not *she*) should have been used to refer to Dr. Anne van der Meiden on p. 4 (column 2) of the October 1981 issue of PC's Newsletter.

2. Earlier in Jan's account (p. 4, column 1), a touch of humor was inadvertently omitted. The last Dutch paddle steamer, the Kaptein Kok, in her early days distinguished between second-class and first-class passengers by calling the former "men" and "women" but the latter "Ladies" and "Gents."

3. What Jan intended to say in the first sentence of his last paragraph (p. 6, column 1) was that "such fraternal links at home can be a good foundation; the good roof for communication, however, connot exist except worldwide" or "can exist worldwide only." More colloquially, national communication societies are the building blocks, but the international communication holds them all together.

Thank you, Jan, for your article and for the corrections. With the best of intentions, we misunderstand one another—and reach better understanding by explaining and revising the errors.

Guide for Writing

PC-ers Craig Harkins of IBM (San Jose, CA) and Daniel L. Plung of Exxon Nuclear (Idaho) are joint editors of *A Guide for Writing Better Technical Papers,* recently published by the IEEE Press.

The book consists of 48 reprinted articles, selected from a variety of sources and grouped in five categories:

Getting Started
The Rhetoric of Papers & Articles
Tricks of the Trade
Some Research Results
Following Through

In using the book, authors can either focus attention on one aspect of writing or follow the steps from planning an article to polishing it.

The IEEE news release on this *Guide* points out that although most professionals know writing to be an important skill, many of them find it difficult. Harkins and Plung have provided 228 pages of help for the latter.

To obtain the *Guide* postpaid, send a check and your IEEE Member Number to IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854: for the paperbound edition,

$11.45 (IEEE Members only); for the clothbound edition, $17.20 (Members) and $22.95 (nonmembers).

Document Design International

As reported in *Simply Stated* for September 1981, an international group of social scientists discussed everyday paperwork at the 6th World Congress of the International Association for Applied Linguistics held in Lund, Sweden, August 1981. The discussion concerned aspects of revising present corporate and government documents and understanding the attitudes and behavior of ordinary readers.

It is all very well, one speaker pointed out, to have linguistic knowledge about written language, but we must also have practical plans for applying this knowledge and for finding out how effective the applications have been. Guidelines for writing will do no good unless they are followed.

Another speaker reported having revised a complicated Swedish law in several ways, as an experiment. Lay persons did not understand either the original version nor the version with no long sentences, nominalizations, embeddings, cross-references, and legalese. They did understand the version written from their point of view—the one that told them how to act in order to comply with the law. The fact that the easier text was also longer suggested that "shorter is not always simpler."

Techniques and strategies of reading were a third speaker's subjects. "Reading technical material requires more than simply language skills," she said. "It is a problem-solving task that involves many other psychological processes."

How To

Treat the Whole Document

Don't just clear up the symptoms, say the editors of *Simply Stated* (October 1981); find out what causes them and take care of that.

In terms of communication, this becomes—Don't try to simplify document merely by turning complex and technical sentences into clear ones; consider the overall organization and approach of the text and then rewrite accordingly.

More specifically, determine the purpose of the document, the needs of the intended audience, what the text will demand of readers, what they will demand of the text, and what other constraints may be operating (cost of production, mode of distribution, etc.)

For example, when the Document Design Center of the American Institutes for Research undertook to improve an employee benefits handbook, the first step was to talk to the employees; the second step was to reorganize and reformat the book so that the employees could find answers to their questions; and the third step was to revise ponderous sentences.

In this process, information was regrouped, fewer headings were used, and headings were distinguished graphically. Then the headings were personalized: "Coordination of Benefits" became "What if someone in my family is covered by two group health plans?" "Conversion Privileges" became "Can I convert my health coverage to an individual policy?"

Last of all were the sentence revisions. For example,

Before

Benefits are paid if an insured employee or eligible dependent incurs covered charges because of pregnancy. Reimbursement for hospital and out-of-hospital maternity charges will be made on the same basis as for any non-maternity condition covered under the plan.

After

If you or one of your insured family members becomes pregnant, the Plan will pay for medical care in the same way that it pays for any other medical condition.

From another point of view, don't expect to tune up your car merely by changing the spark plugs.

Report Construction, by Mary Fran Buehler, tells how to *build* reports. It is a 60-page handbook with practical, usable chapters on such subjects as sources of information, scheduling, organization, charts and tables, revision, and format.

Order this all-time best-seller from IEEE/PC, 6411 Chillum Place, N.W., Washington, DC 20012. Send a check with your order: $3.00 each for 1 to 10 copies; $2.75 each for 11 to 25 copies; $2.50 each for 26 or more copies.

PC's 1982 Conference

PC will hold its 1982 Communication Conference in the facilities of Colonial Hilton Inn on the Lynnfield/Wakefield border, at the intersection of Massachusetts Route 128 and Interstate Highway 95. The dates of this Boston-area conference will be October 13 through 15; the theme will be *Strategy in Engineering Writing, "Sharpen Your Competitive Edge."*

A call for papers and two submittal blanks appear elsewhere in this *Newsletter.* Cluster round, PC-ers. Support the Conference and improve your ability to communicate.

AdCom Meetings in 1982

Four meetings of PC's Administrative Committee have been scheduled for 1982:

May 5	9 AM–3 PM Sheraton Hotel Prudential Center Boston, MA 02199 (Conference room to be announced)
October 13	9 AM–3 PM Colonial Hilton Inn Route 128, Exit 31/32 Wakefield, MA 01880 (Parlor C)
December 3	IEEE Headquarters

Two of these meetings—those in May & October—will be held in conjunction with communication conferences in the Boston area. The conferences are discussed elsewhere in this issue.

PC members-at-large will be welcome at all AdCom meetings and in all sessions of both conferences. Communication has become a major industry in its own right as well as being an important adjunct to other industries. Forward-looking individuals in all fields are beginning to understand that having communication skills is an important personal and professional accomplishment.

Join us, PC'ers, in New York or in Boston.

ITCC

The 29th International Technical Communication Conference of the Society for Technical Communication will be held May 5–8, 1982 at the Sheraton Hotel in Boston.

Two associated events will take place at the same hotel before the ITCC meetings:

American Medical Writers Workshop (May 4)

Second Careers Institute (two parts, May 4 and 5)

The concurrent sessions of five conference stems of the ITCC will explore the areas of:

- graphics
- education and research
- writing and editing
- communication management
- computer applications and technology

For further information, inquire as follows:

ITCC: John Minniti
31 Winslow Road
Winchester, MA 01890
(home) 617-729-9328
(work) 617-671-2541

AMWA: Judith Linn
37 Forty Acres Dr.
Wayland, MA 01778

Second Careers: Joseph A. Rice
P.O. Box 525
Manvel, TX 77578

INTECOM

Excerpts from a communique issued December 30, 1981 by E. N. White (England), Secretary-General/Treasurer of INTECOM (International Council for Technical Communication):

1. The minutes of the 13th Council & General Assembly of INTECOM, held in Holland last September have been edited and will be issued shortly, with amendments to the bylaws approved by the Council.
2. Welcome to new Members:
   The Association of Teachers of Technical Writing (USA);
   The Japan Society for Technical Communication;
   and to a new Corresponding Member,
   The Israeli Society for Technical Communication.
3. The Institute of Technical Communicators of South Africa has applied for membership.
4. The next council meeting will be held at Boston in the USA at the time of the STC Conference (29th ITCC) May 5-8, 1982.
5. Congratulations and thanks to our Dutch friends in STIC (Studiekring voor Technische Informatie und Communicatie) for their many kindnesses to our officers and delegates during the meeting in Holland. The business arrangements were excellent, and the social events gave us many happy memories.

SSP

The Society for Scholarly Publishing will hold its fourth annual meeting June 24–26 in the Washington, DC area—Crystal Gateway Marriott, Arlington, Virginia.

The theme of this year's conference is "The Challenge of Change: Critical Choices for Scholarly Publishing." Fifteen sessions are planned on the effects of new technologies and governmental changes on scholarly publishing.

The conference will open with a plenary session, "How are Higher Education, Research, and Scholarly Communication Being Affected by Demographic and Economic Trends and Shifts in Government Policies?" Later sessions will be devoted to such topics as

- reference works
- bibliographical issues
- publication management
- academic publication
- communication media
- indexing
- marketing
- copyright

For further information, inquire of Alice O'Leary, Society for Scholarly Publishing, 2000 Florida Avenue NW, Washington DC, 20009; telephone, 202-638-5970.

New Play by Lufkin

When the Society for Scholarly Publishing meets in Washington next June, a new play (?) will be presented—"The Digitized Gatekeeper's *Last Word*," written, produced, directed, and acted in by PC-er Jim Lufkin, editor of *Scientific Honeyweller* and "godfather" of SSP.

Erratum

Through an error that was not corrected in proofreading, Marvin Neiditz's article on using communication professionals to improve engineering designs, in the PCS Newsletter for October 1981, was printed with several paragraphs out of order.

The article is reprinted correctly, in full, in this issue, with apologies to the author and our readers.

Use of Communication Professionals in the Engineering Design Process

Marvin M. Neiditz

Abstract

As increased computer use is changing many traditional engineering tasks, new technology is changing the traditional roles of the technical documentation department to include new tasks. One development is the use of the communication professional in the design of computer based systems.

Computer-based systems are defined as those devices that utilize a computer in their operation and require an operator. The computer may be as large as 360/370s in tandem or as small as single-chip microprocessor devices. Major systems are used in power, communications, process controls, avionics, and military or space technology. Commercial products include household appliances, office machines, industrial controls, medical/scientific equipment, and automobiles.

The traditional outputs of the documentation department include:

- proposals
- manufacturing documentation
- operation and maintenance manuals
- training programs
- advertising

These traditional documentation tasks can be broadly defined as TRANSLATION. The communication professional takes existing data and refines them into documents based on the needs of the user and written to the reading level of the user.

The communication professional can add substantial input to the design process of computer-based systems. The most important contribution is that of human factor engineering. This can be most effective in projects where system operation uses operator input, system-to-operator displays, or automatic maintenance or fault localization procedures. The writer's professional training and experience in this particular facet of human factor engineering—COMMUNICATION—can be an important resource in the design process. The following paragraphs detail specific design problems.

Basic Design. Precise definitions, clarity, and good organization of proposals and functional specifications can result in software (programs) that does the intended job. Utilizing the writer early in the design process gives the writer an opportunity to better understand the system and also gives him time to research areas of interest.

System-To-Operator Communications, As previously mentioned, it is in this area of communication that the writer's input can be most important. In specifying equipment, within the engineering limits of form, fit, function, cost, etc., the choices of communicating devices are many. Analyzing the communication problem of *what* is to be presented by the system and to *whom* it will be presented can lead to a superior product. As an example, an industrial process originally had a proposed VOLUME GAUGE. Upon analysis of exactly what the message was and to what level the operator was actually working on the equipment, the final design used a "TANK FULL" message in red LEDs.

Equipment names and control design or placement involve basic communication tasks. The tech manual writer and the training specialist all too often are faced with the problem of making nonhuman engineered devices intelligible. Early use of their skills in the design process could result in superior products and cost-effective use of their time.

The writer's skill can also improve the message that the system presents to the operator. Because of his direct application of the Reader Rule, the writer knows how to investigate and analyze who the reader (operator) will be, what the reader can comprehend, and what "buzz" words should be used in a particular application. Truck drivers and fighter pilots talk differently.

The writer's skill in the Use Rule can confine the computer-based instructions to the main function and eliminate overlapping or confusing statements. His experience in Organization and Style will add to the design input to make the display intelligent. I have seen circumlocution, ambiguity and, yes, even verbosity in LED displays.

Operator-To-System Communications. Again, the basic function (communication) needs the communication professional. Within the engineering parameters, the human factor of feedback may have a considerable input to equipment choice. I'm sure that all of us, at one time, have become upset when using a simple hand calculator that had no tactile response. A question might be, "Does an operator at a console need a feedback from the

valve—four miles away—that he has just opened?" Is there really a need for a full keyboard or does the skill and training level of the operator demand lit function keys, switches, or even voice-controlled devices?

The operator response message needs to be tied to the communication Reader and Use rule. Is the device to be used by highly trained personnel or by the general public? Should the operator be able to check his response before actually reading it into the system (an ENTER key)? How will this new procedure differ from the procedure to which he was accustomed? In all of these communication areas, the writer's skills can be used early in the design process.

If wrtiers are used in the design process, computer-based systems can be built with more efficient human interfaces, can be more marketable, and thus will be more profitable.

"...In 1868, the USS Wampanoag was a steam-driven warship that could go twice as fast as any sailing warship afloat, and, because it was propelled by a steam engine, it was not subject to the vagaries of the wind. It surely was a naval tactician's dream. Unfortunately, naval officers did not see it that way. Instinctively, they rejected it as something too revolutionary, decrying its profound differences from ships in use at the time, not its performance. It was averred that if sailors did not have to climb the rigging in wind and storm, they would grow soft and would pale in the face of battle! In 1869, the Navy dropped Wampanoag from the fleet. Another ship of its equal was not commissioned for almost 30 years..."

Adm. Stansfield Turner, USN (Ret.)
Former Director, CIA

"Unless you...utter speech easily understood, how will it be known what is being spoken? You will, in fact, be speaking into the air."—1 Cor. 14:9.

Reprinted with permission from "Awake!" (February 22, 1981), publication of the Watchtower Bible and Tract Society of Pennsylvania

Thoughts about Engineers

Comments by 8 to 10 year-olds published in MIT's Technology Review.

There are many different kinds of engineers, like electrical, chemical, and even civilized engineers.

The sanitary engineers are the cleanest of all engineers—or would like to be.

One day I hope to be a famous engineer and do it in my city's outer skirts, because that's where all the action is, if you know what I mean.

Engineers can't be nervous or nutty—their work is a serious business. One wrong move and it could mean phoof in the pipes.

A computer has five parts—input, output, and the rest is memory which I forgot.

Oscillators are things that only encyclopedias know for certain about.

The meaning of sextant is something I can't write about.

I want to be an engineer when I grow up. Tell me just how good I have to be in math, because if I have to be real good, don't count on me coming.

Reprinted from the June 1981 issue of the Electrical Insulation Newsletter

IEEE Course Offered In Personal Finances

More than 1,000 U.S. IEEE members are participating in a program to study personal financial planning at home.

The program was developed by experts in banking,insurance, taxation,investments and other financial fields to teach people how to manage their personal and business finances.

The program has six parts—investments; employment benefits; building a financial foundation; taxes, gifts, and joint property; trusts and wills; and plans and prospects. After completing each part, participants mail in answers to problems presented and are sent analysis of solutions and the next topic. The program also includes a confidential financial analysis—an individualized examination, by mail, of the participants present financial situation with specific recommendation.

This IEEE-approved home study course can be ordered by IEEE members from the IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854, for $49. For more information, contact Fern Katronetsky at (212) 705-7870.

Help Wanted

Jobs of two kinds are immediately available for technical and engineering writers:

1. Openings for individuals who can express technical data clearly and who have technical backgrounds in digital logic, radar and radar systems, or computer operations.

Knowledge of the complete production cycle of technical manuals—from estimating to printing—is highly desirable.

These persons will write Mil-Spec technical manuals covering theory of operation, operating instructions, service diagrams, and maintenance procedures for computer-

controlled radars and radar systems.

2. Openings for engineering writers who are experienced in managing or writing proposals, technical reports, specifications, or similar documents.

Candidates must be capable of independent work and able to communicate with engineers, managers, and government personnel in various technical disciplines. Familiarity with shipboard combat systems, radars and computer programming is desirable but not required.

These jobs are open in a New Jersey suburb, 15 minutes by car from Philadelphia and one hour from New York City. Salary and benefits are excellent. Work programs offer stability, potential for growth and professional challenges. Call Leon Pickus: (609) 778-3660 (8 AM to 5 PM); (609) 235-6102 (after 6 PM).

New IEEE Journal

The IEEE Transactions on Medical Imaging is a joint publication of four IEEE societies: IEEE Engineering in Medicine and Biology Society, IEEE Nuclear and Plasma Sciences Society, IEEE Group on Sonics and Ultrasonics, and IEEE Acoustics, Speech and Signal Processing Society. The journal is published in cooperation with the IEEE Computer Society.

The journal will focus on a unified common ground where instrumentation, systems, transducers, computing hardware and software, mathematics and physics are handled together. Authoritative studies will be published on generation, processing and/or display of medical images.

The journal will publish original contributions on medical imaging relating to utlrasonics, x-ray imaging and tomography, nuclear isotope imaging systems, image processing by computers, microwave and nuclear magnetic resonance imaging, radiation sensors and detectors, mathematical tools analysis of medical image formation, perception, display, and pattern recognition. Studies involving highly technical perspectives will be most welcome. All submitted papers will be peer-refereed.

Publication will begin in 1982 as a quarterly journal with 400 pages per year. High quality reproduction techniques will be used. Details related to submission of manuscripts may be obtained by contacting Michael M. Ter-Pogossian, Ph.D., Washington University, School of Medicine, 510 South Kingshighway, St. Louis, MO 63110.

A member of any IEEE society may subscribe at a cost of $8.00 per year. Costs to non-IEEE members are $50.00 per year. To order, write to IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. Telephone (201) 981-0060.

When available, a sample copy of the *IEEE Transactions on Medical Imaging* can be obtained by writing Martin Plotkin, Brookhaven National Lab, Bldg 902A, Upton NY 11973

Charts and How to Use Them

A review in the newsletter of the Industrial Communication Council for April 1981 describes *The Handbook of Graphic Presentation*, a "revised up-to-date volume" by Calvin F. and Stanton E. Schmid (John Wiley and Sons, 306 pp., $16.50).

The book is called a working manual for those who want to present and interpret statistical data in graphic form. Separate chapters give the advantages and disadvantages of using different types of charts to show different kinds of data; distortions that can arise when unsuitable charts are used; and difficulties that can arise in making charts.

There is a new chapter on drafting techniques, equipment, and material.

Money spent on the brain is never spent in vain.

The best way to get rid of worries is to let them die of neglect.

Success without honor is an unseasoned dish; it will satisfy your hunger, but it won't taste good.

Joe Paterno

The Ten Commandments of Electronic Instrument Safety

1. Beware of the lightning that lurketh in an uncharged capacitor lest it cause thee to bounce upon thy buttocks in a most embarrassing manner.

2. Cause thou the switch that supplieth large quantities of juice to be opened and thusly locked, that thy days may be long in this earthly vale of tears.

3. Prove to thyself that all circuits that radiate, and upon which thou workest, are grounded, lest they lift thee to a radio frequency potential and cause thee to make like an antenna.

4. Tarry thou not amongst those fools that engage in intentional shocks for they are not long for this world and are surely unbelievers.

5. Take care that thou use the proper method when thou takest the measures of high voltage circuits, that thou dost not incinerate both thee and thy test meter; for verily, though thou hast no company property number and can be easily surveyed, the test meter has one, and as a consequence, bringeth much woe unto the property manager.

6. Take care that thou tamperest not with interlocks and

safety devices, for this incurreth the wrath of others who know not of thy foolish behavior.

7. Work thou not on energized instruments, for if thou dost so, thy friends will surely be buying beers for thy widow and consoling her in certain ways not generally acceptable to thee.

8. Verily, verily I say unto thee, never service instruments alone, for electrical cooking is a slow process and thou mightst sizzle in thy own fat upon a hot circuit for hours on end before thy Maker sees fit to end thy misery and drag thee into his fold.

9. Trifle thou not with radioactive tubes and substances, lest thou commence to glow in the dark like a lightning bug, and thy wife be frustrated and have no further use for thee except for thy wages.

10. Commit thou to memory all the words of the prophets written down by those who survived before thee. This straight dope will console thee when thou hast suffered a ream job by the chief engineer.

From the Newsletter of IEEE's Geoscience and Remote Sensing Society (September 1980); modified by Travis Walton from a list printed by Hospital Safety Testing Labs, Stoughton, MA.

Seventeenth-Century Comment

The shame of speaking unskillfully were small if the tongue only thereby were disgraced. But as the image of a king in his seal ill-represented is not so much a blemish to the wax, or the signet that sealed it, as to the prince it representeth, so disordered speech is not so much injury to the lips that give it forth, as to the disproportion and incoherence of things in themselves so negligently expressed.

Neither can his mind be thought to be in tune, whose words do jar; nor his reason in frame, whose sentence is preposterous; nor his elocution clear and perfect, whose utterance breaks itself into fragments and uncertainties.

Negligent speech doth not only discredit the person of the speaker, but it discrediteth the opinion of his reason and judgment; it discrediteth the force and uniformity of the matter and substance.

If it be so then in words, which fly and escape censure and where one good phrase asks pardon for many incongruities and faults, how then shall he be thought wise whose penning is thin and shallow? How shall you look for wit from him whose leisure and head, assisted with the examination of his eyes, yield you no life nor sharpness in his writing?

From "Timber, nor Discoveries made upon Men and Matters," by Ben Jonson (quoted in *"The Underground Grammarian,"* October 1981).

Unknowingly, we plough the dust of stars, blown about us by the wind, and drink the universe in a glass of rain.

Ihab Hassan

Dictionaries Galore

Do you need a dictionary? Monolingual or bilingual? Industrial terms? Military words?

Arabic	accounting
Basque	aeronautics
Chinese	agriculture
Danish	architecture
English	automotive mechanics
Finnish	biology
French	business and commerce
German	chemistry
Greek	data processing
Hungarian	education
Italian	electronics
Japanese	finance and banking
Lithuanian	insurance
Norwegian	law
Portuguese	mathemtics
Russian	medicine
Serbo-Croatian	mining
Spanish	music
Swedish	photography
Turkish	physics
	political science
	psychology
	religion
	television and radio
	textiles

The Dictionary Store

115 Fifth Avenue, New York, NY 10003
212-673-7400

610 Fifth Avenue, New York, NY 10020
212-581-8810

652 S. Olive St., Los Angeles, CA 90014
213-489-7963

Two Ways to Communicate

There is a big difference between talking and writing. They are not merely optional ways of expressing the same substance.

Talking is normally a social act. Writing, unless it is simply copying the given word, must be private: it needs the "leisure and head, assisted with the examination of the eyes," time, solitude, a visible record, and attention.

How we speak, in the press of the moment, is usually the result of habit. How we write, in solitary thoughtfulness, *can* be the result of choice.

Richard Mitchell, "The Underground Grammarian," October, 1981.

Plain Languages

Simply Stated, a newsletter devoted to problems of written communication published an International Issue in September 1981. Its editors wrote the following introduction:

> The movement for plain languages is not confined to English, nor is it confined to the U.S. Throughout the world, linguists, psychologists, lawyers, business people, and government officials are trying to reform the written communication that societies depend on. The theme does not vary much from country to country: public and institutional documents should be written in language that ordinary people can understand.

The issue contians brief notices about plain-language movements in

Canada (industry and commerce)
England (text design)
Holland (government rent program)
Ireland (bilingual bureaucracy)
Romania (law and administration)
Sweden (government, university, and private activities.

Several of the articles give the names and addresses of individual investigators.

Fog in Print

Many people tend to rate what they read by how "intelligent" it sounds, rather than by how understandable it is. J. Scott Armstrong, a marketing professor at the University of Pennsylvania, recently illustrated this. He asked 20 management professors to rate 10 management magazines that are written with varying degrees of clarity. "Sure enough," says the report in *Psychology Today,* "the top-rated journal was the hardest to read; the lowest-rated one, the easiest."

To test whether the more prestigious journals were harder to understand because they tackled more complex ideas, Armstrong rewrote sections to make them more readable without changing the meaning. He broke up long sentences, used simpler words, took out excess words.

One highly rated journal at first read: "This paper concludes that to increase the probability of keeping a (bank) customer in queue, the server should attempt to influence the customer's initial subjective estimate of the mean service time to give him the impression that it is small, or attempt to convince the customer that his time value of service is large."

This was changed to: "You are more likely to insure that a (bank) customer waits in a queue if you can get the person to think that he will not have long to wait. Another way to do it is to get the customer to think he will obtain much benefit by waiting."

Another group, this one made up of 32 professors, then rated four such samples without knowing the sources. "Once again, the professors rated the easy version lower than the more difficult one," reports *Psychology Today.* Professor Armstrong summarized the import of his findings by saying: "If you can't convince them, confuse them."

Especially are writers in the fields of law, religion, and medicine often guilty of producing fog in print. "What doctors do to English can make an editor weep," writes Alfred D. Berger, managing editor of *Medical World News.* Berger told of a case where a medical student's instructor insisted that she write "diaphoresing profusely" instead of "sweating heavily."

The editor explained that medical jargon becomes a part of a doctor's vocabulary in medical school because of "a natural desire to pick up the lingo of the big guys—the residents and faculty." He continues: "Throw in a certain amount of laziness—it's easier to use an all-purpose buzzword like 'procedure' than to select a more precise word, such as test, operation, method, or technique."

Another factor, Berger says, is a conscious effort to use "vocabulary nonprofessionals won't understand. This makes the users feel wiser and more learned than the nonusers and also lets them talk over the heads of the uninitiated."

Writing in the *New England Journal of Medicine,* Dr. Saul Radovsky agrees: "A look at medical journals shows that good science and good writing rarely go together and that easily understood writing is often too much to expect." One example was cited where a research wrote:

"We used a chemiluminescence assay to examine the patient's polymorphonuclear leukocyte responses to numerous particulate and soluble stimuli. The patient's polymorphonuclear leukocytes had substantially depressed chemiluminescent responses during phagocytosis of opsonized particles."

What the scientists meant was that the patient's white blood cells were not producing the normal amount of light when attaching foreign substances in the blood-stream.

Clearly, there is little justification for expressing even complex ideas with complicated words. Either the person is trying to impress someone or he is incapable of expressing himself clearly.

A publication of the IEEE Professional Communication Society

Patents and Patenting
for engineers and scientists

ISBN: 0-87942-700-0

Edited by
R.J. Joenk
IBM Corporation

This primer on patents and patenting does four things for the would-be inventor and interested layman: (1) It explains the *conditions* necessary for patenting—what kinds of inventions can be patented and what characteristics the individual inventions must have to actually receive patent protection. (2) It tells how to read and interpret a patent and how to *search* for existing patent information. This is especially important because an invention can be patented only once, even if it is developed independently by different people; the inventor must be aware of what exists in his field. (3) It advises how to *protect* ideas and create the best possible basis for a patent application. And (4), it describes the *process* of patenting, i.e., how to obtain a patent.

This book is based on the special issue on patents of the *IEEE Transactions on Professional Communication* (vol. PC-22, no. 2) published in June 1979 but now out of print. Written not in legalese but in reasonable English, that issue was widely used in both industry and the legal profession to demystify patenting and to educate and encourage would-be inventors.

To the original collection of 17 papers were added three papers on preventing and coping with patent infringement, an update on the legal status of inventions involving software, and an introduction to the new concept of patenting man-made life forms. The original papers were reviewed and updated for currency of information and most of the tables and figures were either replaced or updated.

The bibliography was enlarged to 220 items and includes Creativity and Inventors; Guides and Introductions; Invention Protection; Searching, Retrieval, and Use; Business and Management; and Special Topics. An appendix provides the text of the more frequently cited sections of the patent laws; a glossary was added to define the technical terms of patent language; and an index was created to expedite use of the book and simplify information retrieval.

Contents

112 pages, 8.5 in. × 11 in.
illustrated
$7.50 (IEEE member price $6.00)
10 or more copies, $5.25 each

Order from:

IEEE Professional Communication Society
c/o L.K. Thuss
The Johns Hopkins University
Applied Physics Laboratory
Laurel, MD 20707
(301) 953-7100 x596

3692233 SM 26N
E K SCHLESINGER APR23
7 HOLMEHURST AVE
BALTIMORE MD 21228

Send Form 3579 to IEEE, 345 East 47th Street, New York, New York 10017