b. The psychology of reading—the attractions and deterrents that encourage people to read and "read on" or repel them from beginning to read and "turn them off" in mid-sentence.

c. The economics of reading—the problem of money and timeliness involved in producing and purchasing "hard copy."

The idea of functional typography is that every element on a printed page must do a useful and necessary job in one or more of these areas of getting people to "stay with it." Non-functional elements are non-functional elements.

In a given instance, for example, should the type be large or small, plain or elaborate? What about format and spacing? What about headings, paragraphs, justification, pagination, photographs? Balance white space with text space; put headings, subheads, notes above, graphs, pictures, and tables.

Nothing will guarantee 108% readership, and getting 80% is a major miracle, so fight for individual readers. Each reader has only a certain amount of time that he will devote to any publication. "When that time is used up, whether it has been used productively or whether it has been wasted—does that time is done, is it done. Whether he is on page five or page 53 or anywhere between, this is it."

So be sure that every typographical element "works" to keep reader with you. Make each page look inviting and uncompleted. Don't force the reader to guess, don't let him feel confused or tired or even the least bit bewildered.

Remember, you are competing for every reader's attention against every piece of printed matter that comes into his house or his office. Lose readers, like fish, with "wars worse" and careful preparation.

Washingtonese

From a House Bill on a tax revision law:

If any credit allowed for any taxable year is increased by reason of a credit carryback, such increase shall not affect the computation of interest under this section for the period ending with the last day of the taxable year in which the credit carryback arises, or, with respect to any portion of a credit carryback from a taxable year attributable to a not operating loss carryback, ... such increase shall not affect the computation of interest under this section for the period ending with the last day of such subsequent taxable year.


Eh?

The thesis of this essay is at the same time straightforward and radical. I suggest that a haematocrit phenomenon of communication stands dialectically juxtaposed to a logical positivism of communication such that the former functions as a presuppositional critique of the latter.


Ad Com Meeting

Members of PC's Administrative Committee met on June 6, 1980 at IEEE Headquarters in New York City. Highlights of their discussion and decision are as follows:

1. IEEE's Educational Activities Board will be asked
   a. to discontinue advertising the Workshop on Technical Communication and Report Writing, and
   b. to refer all inquiries about the Workshop to PC.

2. We have a limited number of "travelling instructors" on call, and, because of differences in administrative procedure, can charge less for the course and even realize a small profit if we make arrangements directly and not through KAI.

3. There are now more than 1500 PC-eers. This number represents a growth of 15% in the most recent reporting period—greater than that of any other IEEE entity. Rich Robinson, our Membership Chairman, has been sending letters to persons who have dropped out of the Society and also to persons who marked a PC code in their Technical Interest Profile.

4. Bob Zuck would like to have back copies of PC's Transactions—Vol. 21/3 (March 1978) and Vol. 22/3 (September 1979). If you have an extra copy of either issue, please send it to him at IBM Corporation, Dept. 486, Edg. 209, P.O. Box 1500, Boulder, CO, 80302.

5. PC-eers, especially Ad Com members, are urged to support our publication effort by suggesting topics or authors for papers and new items, asking colleagues to submit material, or writing articles, notes, paragraphs, or general interest items themselves. Note the article by Ray Stogun in this Newsletter; it is his second, and he promises more. Thank you Ray; keep them coming.

As of June 20, three members have responded, but all, unfortunately, declined with regret. Bob Winton of London, recently retired from Business, continued on page 2
The letter from P. N. Applegren of Sweden (AddOn item #5) has been much on my mind. He writes that he finds PCs publications interesting and helpful, but that our projects are not very useful to a Swedish computer user. I must seriously consider any rational suggestion. The question, How can I help?, has been asked many times, but no one has made any answer.

With the establishment of IEEECON, however, and the increased number of international meetings conducted in English, there may be some worldwide desire to upgrade skills in using this language. PCs' News-Story feature might appeal to those who have considered communicating with a trans-national audience, or those who would join in a trans-national organization. And managers in trans-national companies might consider having Ron Billing present the Workshop for selected employees.

What else can PC offer non-US PC-users? Or are the eight-year publication issues sufficient? Editors and officers will welcome your communications.

CANDIDATES FOR ELECTION TO PC'S AD COM

PC-users whose brief bios appear herein have been nominated for the three-year term 1981-1983. If Bert Pearson remains, the nominations for September will be the persons who will be elected.

RONALD S. BLICQ
Ron Billing has been involved in technical writing for almost 25 years. His background includes 10 years as an aviation officer with the Royal Air Force in Britain, 10 years as technical editor and technical writer for the Electronics Division of IBM Industries in Canada, and 15 years as an instructor of technical report writing at Red River Community College in Minnedosa, Manitoba, Canada.

Ron is head of the Department of Industrial and Technology Communications at Red River College and chair of The Ander Group (communication consultants). Chairmen of PC's Education Committee since 1972 and recipient of PC's Golden Award in 1977, he wrote the home-study course and workshop that PC sponsors and has organized their presentation from the beginning. Both are based on his text, Technically Correct - in which a second edition is now being printed.

DAVID C. CROCKER
Dave Crocker holds a BSEE Degree from MIT and is a Registered Professional Engineer in the Commonwealth of Massachusetts.

For the past 30 years he has served with the Charles Stark Draper Laboratory, Inc. in Cambridge, Massachusetts.

Be careful, however. Breaking a "rule" often leads to disaster, especially if the violation itself is so startling as to detract from its intended purpose. Try to get unusual effects legitimately.

Don't use sentence fragments. Proofread carefully to see if you left any words out.

Don't use commas that are not necessary. Repetition can be eliminated by re-reading and re-writing.

Writers must not shift point of view. Don't write in dialect. Don't begin a sentence with a conjunction. Don't use exclamation marks. Place pronouns close to their antecedents. Use hyphens sparingly. Write adverbs correctly. Don't use contractions in formal writing.

A careful writer avoids dangling participles. Don't use old-fashioned words or phrases. Never split an infinitive; or remember, never split an infinitive; or even split an infinitive. Don't write run-on sentences; they are hard to read. Don't use double negatives. Use the semicolon properly; it serves best to separate sentences that are closely related.

 Reserve the apostrophe for its proper use; omit it when it's not needed. Write positive rather than negative sentences. Verbs have to agree with their subjects. To end a sentence with a linking verb is sometimes thought improper. Use correct verb forms. Don't mix metaphors. Don't use slang or jargon. Don't be redundant. Writers should use singular pronouns with singular nouns in their writing; or Pronouns should agree in number with the nouns they stand for. Don't exaggerate. Use alliteration for special effect only.

Don't use several prepositional phrases in a series. Use correct tenses. Don't use quotation marks.

WOE SENTSENCES

PC-user Robert J. Preston of District Magazines (Haverhill) wrote this openended contract report. The author of the report has a job in Japan. The native language is not English. Neither of these facts, however, is sufficient to explain or excuse the carelessness displayed and the incomprehension suggested in these inadequate messages. Editor needed.

#1 In every k digits of the X sequence on digit is replaced by the frame digit, (k-1) digits are used to scramble the data, only one digit is preserved during transmission, namely.

#2 Therefore in GP(x) the product between the element, P(x) and in the element, P(x) is the element, x=x.

#3 If we lift this digit out of every k digit of the transmitted data sequence and from a sequence.

THOUGHTS ON FORMAT

In July 1979, Saul Arnold, author of three books on graphic arts, took part in a workshop at a convention sponsored by Agricultural Communicators in Education, and a report of his remarks appeared as "Graphic Notes" in the ACI Quarterly (July-September 1979). The paragraphs below present some of his ideas briefly.

You cannot make a fish bite on a hook, and you cannot make a reader read your printed communication. But you can put on "enough warm spots" to land the fish, and you can use techniques of "functional typography" to coax potential readers into receiving your message.

Therefore, consider three aspects of print media that affect readers' ability to "stay with it":

1. The mechanics of reading—the knowledge and experience needed to decode all the spelling and word-choice and the narrow relationships of grammar into what the reader kindly "reasons" in the first place.

2. The sense of reading—the knowledge and experience needed to decode all the spelling and word-choice and the narrow relationships of grammar into what the reader kindly "reasons" in the first place.

3. The mechanics of reading—the knowledge and experience needed to decode all the spelling and word-choice and the narrow relationships of grammar into what the reader kindly "reasons" in the first place.
Computer Take-over?

What will computers do next? Recent articles describe mechanized capabilities as follows:

1.fitting (The Editorial Eye, May 14, 1979)

If a document is written in EDVAC Technical Language (basic and specialized vocabulary), a program UNIVAC (Univac Quality, Quality Test, Edition/Revision) will flag such errors as excess length of sentences, incorrect sentences, ambiguous sentences, passive verb unclear reference of previous noun clauses, incorrect or non-logical modifiers.

2. Typing (Edisonian Magazine, March 1980)

Optical, a device developed for 'impossible' programs, tracks eye movements. The 'typist' looks at letters of the alphabet in a desired order, and the machine converts the words into 'spelled out' words. A speed of 80 words a minute is valuable.

3. Reading (Edisonian Magazine, March 1980)

If you place an open book face down on the Kurzweil Reading Machine, a synthetic voice will read the words to you as an imitation of natural speech.


A computer has been used to signal the presence of a newly identified brain wave called N400, which occurs when the human mind tries to understand nonsense. For example, the sentence, "He spread songs on his broad," evokes the N400, but a misspelled word does not. Because of its ability to recognize the N400, the computer can be used as a diagnostic or research tool in the investigation of verbal skills, learning and reading ability, and the creative use of language.

5. Providing a full line of office services

Computer systems exist which will receive a document or dictation, return the material typed with words spelled correctly and layout as specified. For example, a machine can typeset an entire document, perform tape overlay and print, provide tape output, or disk storage.

Information derived from The Editorial Eye (May 1980)

Fumbling Replied

(See April Newsletter for Fumbling)

Fumbling is funny because each one illustrates the error it aims against. The revisions suggested below express the "rules" correctly, but represent a well-considered purpose in a particular occasion, almost any such rule can be broken.

Maas (formerly MIT's Instrumentation Laboratory) on the staff of the Lab's Instrumentation Department of America for 22 of three years, he has been concerned with technical problems in design of programming tools, teaching, and consulting.

An IEEE member with interests in broadcasting and communication as well as professional communication, Dave is co-owner with his wife Roberta of a typing/editing firm, Crownegraphia, in Reading, Mass. They specialize in unusual applications of computers and typewriting.

Present Secretary-Treasurer of PC's Boston Chapter, Dave is one of that group "Founding Fathers."

JOHN C. PHILLIPS

John Phillips received the degree of BA in Mathematics, with honors, from Rutgers University and has done graduate work in communication at Temple University. From 1962 to 1967, he was an engineer in the Air Force Electronics Division. Later, as a member of NOAA's corporate staff, he developed technical communications programs and planned technical papers for presentation and publication. From 1972 to 1976 he was Editor-in-Chief of the NOAA Business. He is now Manager, Proposals—Marketing at NOAA Automated Systems.

John was PC's President in 1977 and served as General, Program, or Finance Chairman for four PC Conferences. His Treasurer since 1975, he is also a member of the Editorial Board of the Proceedings and of IEEE's Publications Board.

DANIEL ROSICH

Dan Rosich teaches courses in Information and Decision Science at the University of Connecticut's Graduate School of Business Administration, and also serves as a consultant to businesses and industry.

He has worked on large computer software projects in both technical and managerial roles, but his chief interests at present are machine computer dialogues and problems of protecting privacy in large data-base systems. He has presented papers and conducted workshops on technology, user interface, and social impact of computing technology, applied mathematics, and computer science.

Dan received the PhD degree from New York University and BS degrees from the City University of New York. A member of IEEE/EDA since 1967, he is a Senior Member of both the IEEE and the Institute of Electrical and Electronics Engineers (IEEE), and also a member of the Operations Research Society of America.
Welcome, New PC-ers!

Welcome to 75 new PC-ers who joined us in April, May, and June—49 from the United States and 26 from other countries. We hope that you will be active rather than passive members. As a start, send a comment or a query to one of the addresses at the front of Transactions and Newsletter or care of IEEE in New York City.

Seattle
C. W. Jenny
Chile
C. E. Ochoa-Gonzalez
England
R. W. Heggie
Switzerland
H. Al-Haddad
Canada
J. J. Len

Robert L. Mount

PC-er to INTECOM

Bob Mount, of the Institute of Gas Technology in Chicago, will represent PCB at AIEE 80, the second conference of the International Council for Technical Communication, August 24-27, in Lilleshall, Germany. The account of the meeting will appear in our next Newsletter.

Bob joined ITN in 1972, as Senior Advisor, Technical Writing. He writes, designs and manages the production of technical publications on such subjects as coal liquefaction and gasification, oil shale developments, synthetic fuels, fuel cells, and world energy resources.

His early technical work included engineering and research publications in the areas of atomic, biomedical, and chemical warfare for the United States Army and in guided missiles and countermeasures research for the United States Navy. He was a naval aviator and flight instructor during World War II.

Bob’s activities have included technical reporting on all of the aforementioned subjects, engineering, physical sciences, MBA, industrial processes, metals, machine tooling, electronics, and technical management. From 1965 to 1973, he wrote approximately 200 technical articles for an international clientele that included IBM, Newsday, the Rockefeller Foundation, Science Forum, and Intelligence. His administrative positions have included staff positions as assistant city editor for two metropolitan daily newspapers, managing editor for two technical magazines, and editorial editor for seven journals.

Bob studied industrial engineering at Lehigh University, received his B.S. in Journalism from the University of Iowa, and took graduate courses at the University of Utah and UCLA. Later, as a Sloan-Specialist, he worked at Columbia Point in Mott Haven, where he completed a postgraduate master’s level course in advanced scientific writing.

As a Senior Member of the Society for Technical Communication and a Member of the American Association for the Advancement of Science, Bob recently became an Associate Fellow of IEEE. At Lilleshall, he will present a paper on “Technical Communications from the Global Perspective.” He also hopes that it will stimulate introspection among international communicators and inspire the establishment of a general newsletter.

Bob’s hobbies are sailing, archery, and leather work. By force of their united opinion, his wife, two grown children, and six stepchildren only just convinced him that he should sign up for INTECOM’s post-conference tour instead of giving up to backpack souls in the mountains of Norway.

trying to find if there were any unauthorized sounds about. Cryptography got more sophisticated as we handled classified information. We had data-tape groups and we would “code” the alphabet; additionally, we used a machine to develop a code that really looked the part. We would photograph the slides and bind them in leather and the code. What I am saying is that if you take about five good “cryptological” executives with some versatility (such as a rotating axis, a slide, and a conversion for each day), and put them in a room, you can come up with a code that cannot be broken. When I got here, I challenged the Defense Intelligence Agency (DIA) to break a sample that was written out to demonstrate to them the strength of our system and they could not do it because there were just too many variables. This illustrates the point that the human mind can come up with combinations in 30 minutes that computers can never break.

Summary

Why did I say earlier that we can communicate when immersed in the technical world, do not give enough credit to the human mind? First of all, we communicate better by always looking for a perfect system. A perfect system serves no one—it is bound to be too slow. We are bound to be locked into a system that is in a lot of wisdom in Admiral Goreham’s system that “The best is the enemy of the good.”

Secondly as I said, I believe that an overabundance of communications from the military to the military causes bad habits. I recently told the Milestone in the Naval Academy in a speech that I think there is a greater possibility of their having to depend on their own initiative in an “in-crowd communications” situation that was necessary for my generation especially because of the probable difficulties of radio transmissions in modern warfare.

You have got to think through the possibility of a communication being intercepted. Also, if the enemy is listening to you, they can find out our schedule. They can find out when our officers are brought up in an environment of internal communications. If your code is used in hostile hands, you are in serious trouble, because you are communicating with the enemy. These are problems we are bound to have, and it is necessary for us to think of our policies because they have been conditioned by good communications for years to be at ease when they were not able to “snatch back” with headquartes. Imagine that—we were in a position we had never been before, and we knew how to run a prison organization and bring everybody into the same place and use our communications and put the enemy into a situation where they could try to rely on their own spontaneously and alone.

Thirdly, I believe that people because it seems to ignore Sherrin’s and other strategies, communications are not the same. In fact, we use different techniques of bringing out of communications. Think about it. If it is remotely close to your own ability to be the reader’s experience, in other words, there is no way he can read your communication. There are advantages to a reader when his key or his tool cannot be contacted. They cannot ask for re-

Useful Be’s

Work with your Be’s as you begin to communicate.

1. Be ready to speak. There’s nothing as nice as a cheerful word of greeting.
2. Be ready to smile. It takes 72 muscles to frown and only 14 to smile.
3. Be ready to call people by name. The sweetest music to anyone’s ears is the sound of his own name.
4. Be friendly and helpful. If you would have more friends, be friendly.
5. Be cordial. Speak and act as if everything you do is a genuine pleaser.
6. Be genuinely interested in people. You can learn to like everyone if you try.
7. Be generous with praise, cautious with criticism.
8. Be considerate with the feelings of others. It will be appreciated.
9. Be thoughtful of the opinions of others. There are three sides to any controversy—you, the other fellow, and the right one.
10. Be alert to give service. What counts most in life is what we do for others.

New Scrambler

A group of U.S. inventors has patented a device called the Phasorone, which can protect private telephone conversations and business radio transmissions at a much lower cost than commercial scramblers. It is self-encrypting and scrambles the signals in such a way that the radio or telephone the signals are sent over cannot decrypt them.

Signaling scramblers by Phasorone cannot be unscrambled without another Phasorone and the applicable code for setting it. Pointing scramblers cost several thousand dollars a unit, but the inventors expect to market the Phasorone for only several hundred.

Information from the Newsletter of IEEE’s Aerospace and Electronic Systems, June 1980.

Course or Self-Study

William A. Herbst is the author of a 3-hour course, Effective Presentation, which is also available as a programmed self-study kit in the Wylie Professional Development Series. The course consists of ten units, all but one of which are divided into several segments:

1. Personal Communications—acquiring a communicator’s perspective and a philosophy of communication.
2. Structure and Thesis—understanding the principles of logic.
5. Ideas Support and Reinforcement—learning how to handle detail.
6. Outlining and Data Gathering—collecting and organizing information.
In its situtation, we devised operating signals under pressure and under the threat of pain, with a real appreciation for safety and efficacy. We found that only four GP signals were needed. The first is one that says "Yes," "Dang," "I am going to do it anyway," the second is "No," "Keep your hands off me," the third is "Stop," and the fourth is "That's enough." These signals can be used in any combination of two, three, or four, and they can be varied in intensity to convey any desired message. This system is effective even when the operator is unable to speak or when the patient is unable to hear. It is a simple, efficient, and reliable method of communication in situations where other means of communication are not possible.

Procedure

But how did we come up with it? How did we "nourish" it? What was the process? We found that for a very American rhythm pattern for a call-up signal: the "shave and a haircut." When an American

can hear "shave and a haircut," even if he never has thought of a code, he automatically knows to go to the barber. The second signal is "buy," "I am going to buy," the third signal is "stop," "I am not going to buy," and the fourth signal is "that's enough." These signals can be used in any combination of two, three, or four, and they can be varied in intensity to convey any desired message. This system is effective even when the operator is unable to speak or when the patient is unable to hear. It is a simple, efficient, and reliable method of communication in situations where other means of communication are not possible.

Scholarship Winner

Brian Glinen received the P&O Scholarship of $3,000 to attend the American Chemical Society's National Meeting in Atlanta, Georgia. The scholarship is awarded to a student who has demonstrated excellence in academic achievement and has shown potential for future success.

Letters from Paris

Ken Bokkman writes from Paris that he is "very busy being unplugged" and needs a vacation. Apparently he has tired of "living alone" at "the Académie Libre" and plans to spend a month in the country.
From Edy Schlesinger to all PCS:  
In P'C's Newsletter for December, 1979, an item called "Request for Help" asked readers to send articles to Julian Seleske, our House-Made (in Israel) Della Whitaker responded by mailing some material from the Society for Technical Communication. Can you help too? See Julian's address above.

PC-ers in STC:  
Nine PC-ers attended the 27th International Technical Communication Conference held by the Society for Technical Communication May 31-17 In Minneapolis:

Ron Silag  Harry Silver  
Dave Donlin  Linda Thrue  
Craig Marlin  Peto Vrousas  
Rudy Jozsa  Yolly Nalls  
Della Whitaker

Ron, Craig, Lida, and Della presided or gave presentations.

-- For the 28th ITC, to be held May 20-23, 1980, in Pittsburgh, Della is already making plans as Program Chairman and Lois is preparing to manage the Writing and Editing. Put the dates on your calendars, eastern PC-ers. We may have an ADS meeting on one of those evenings.

SSP 

The Society for Scholarly Publishing recognizes

IEEE Professional Communication Society as a Charter Member

in support of the advancement of the science and art of communication among scholars.

* * * * * *

New Drama by Lufkin

JAMES M. LUFKIN

The following paragraphs about Admiral Stockdale and communication by a system of one-to-one tagging are reprinted from the Aerospace and Electronic Systems Society Newsletter for March, 1980. The AESS editor extracted this material and nine introductory paragraphs from SIMUL, with permission of The Armed Forces Communications and Electronics Association.

Vice Admiral James Bond Stockdale's A4 fighter was shot down over North Vietnam in September, 1965. Injured after parachuting into enemy territory, he was stripped, beaten, and sent to a POW camp with a broken shoulder and a broken knee. He spent the next seven and one half years in Hanoi's so-called prison (called "Alcatraz" by the POWs), mostly in solitary confinement. During those long years of captivity, the spirit of the resistance to the enemy exhibited by Admiral Stockdale became an inspiration to his fellow POWs in the camp. Word was spread of his heroic actions through an improved "tagging" communication system learned by ruse and used by the POWs in an environment where spoken communication was forbidden.

Admiral Stockdale retired from active duty last September to become President of The Citadel. He previously served as President of the National Computer Conference. His awards include four Silver Stars, two Purple Hearts, and two Distinguished Service Medals. The following extract from the citation given by the Admiral before his retirement to various electronics/communications groups outline the unique engineering were discussed by publishers, researchers, editors, professors, printers, librarians, consultants, marketing managers, and computer specialists.

SSP is the successor to the Association for Scientific Journals, which was "founded" by IEEE, PCS, and Jim Lufkin. SSP held three biennial conference meetings under IEEE/PCS sponsorship in 1971, 1973, and 1977—before forming separate identities SSP is now one of SSP's several organizational members, with PCS as its liaison Society.

The following figures on PCS membership appear in the Annual Report of IEEE's Secretary-Treasurer for 1979:

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<th>Membership by Grade</th>
<th>Affiliate Members</th>
<th>Membership by Region</th>
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<td>Senior Members</td>
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Communication without Technology

by Vice-Admiral James Bond Stockdale, USN (Ret.)

The Morse Code is a good—nobody can speak it who you cannot communicate with the limitations of a biotech system. It is not practical because you have to get a reliable repetitive beat. But how do you build a biotechnical system? There are many ways you could apply mechanical systems to the limitations of letters. I believe the most efficient is a method of letters and has been used in the American alphabet. The letter A is assigned, say, to a 1 for A. A 12 for B. An alphabet is C. It can be stored where we want a 0 and the meaning is reversed, and with the resulting 77 letter alphabet you can make a 5-by-5 matrix. The system is comprised of a row across the top where the letters A, B, C, D, E, F are assigned the letters are arranged in 1-1 for A, 12 for B, 13 for C, 14 for D, and 15 for E. Using the same convention, on the second line the five more letters are added: 21-4 for F, 2-2 for G, and so on. The basic input is a 5x5 matrix, a 1-1 for A, 12 for B, 13 for C, 14 for D, and 15 for E. We can use a rubric letters to indicate the letters of a message. The same also holds true for operating signals you do not need many. I am sure you have a code of a cubic and gave you a contract to devise a system of operating 60 signals you would produce a complicated and cumbersome cross-indexed monstrosity.
Interview with PC's President
Bertrand B. Pearlman

The following is adapted from an account printed in the Student Engineering Newsletter for January 1980:

"The most important thing to remember," says Pearlman, "is that the computer is a tool, not an end in itself. Much computer work is "out of its way" because it is impossible to predict what will be needed in the future, or not the language of either the Journal of Absolute Truth or the dress being presented.

One reference suggests that the paper might be suitable for the Journal of Theoretical Physics, but, in the course of another argument, it appears that the paper is intended for the Journal of Irreproducible Results.

A reliable source has given the following vital statistics on the morning mass of The Fallas' statue in Manila: 18 minutes in rehearsal, and 30 minutes in performance because of 50 interuptions by audience laughter and B by prolonged applause and vigorous cheering.

VCC / West

After three consecutive years in New York City, the VCC / West, the COMPUTER COMMUNICATIONS CONFERENCE will meet on the West Coast. From September 29 to 29, seminars and an exhibit of equipment, services, and progress will be held at the Los Angeles Convention Center.

The recently concluded VCC in New York drew over 10,000 attendees—section picture, television, audio-visual, and photographic specialists and management.

The New York Times described the VCC as "adding... new..." with "exciting new developments." A survey of the West Coast shows that "new..." has appeared in the program of more than 50 seminars and workshops on technical and general operational subjects. Several seminars will concern special applications in such fields as sales and marketing.

Operations, management, and education, research, and development, law enforcement.

The International Federation of Scientific Editors' Association (IFSEA) is celebrating its 30th anniversary and has been associated with books and publishing since 1950.

The position of the Conference will be held in Boulder. The theme will be "Scientific Information Transfer: People, Methods, and Meanings," and the conference will be held at the Boulder Conference Center.

In addition to the scheduled seminars, JSDA, the Information Film Producers Association, will begin its national convention with a concurrent reception at the JSDA, and meetings are also planned by the Association for Multi-Image, the Health Education Media Association, and the International Television Association.

The VCC Exhibitions Hall will feature the latest in equipment and production services.

Obtain a full program brochure from VCC Conference Management, 500 Sober Street, Stanford, Connecticut 06901.

Security

The Third International Conference on Security Through Science and Engineering will be held September 26-29, 1981 in Berlin (West) Germany. It is being sponsored by the Technical University of Berlin.

University of Kentucky College of Engineering
IEEE Technical Groups and Aerospace and Electronic Systems Society

IEEE will provide a forum for discussion of information and exchange of ideas concerning applications of science and engineering in aerospace, security, and crime prevention.

Papers will be read and discussions held on such subjects as

police, alarms, command, and control systems
automatic vehicle monitoring
automatic identification and authentication of voice, handwriting, fingerprints, and other signatures
searching aids—acoustic, sonic, magnetic, microwave
conservation of electromagnetic spectrum
privacy and security in communication

All sessions will be presented in English, French, and German through the medium of simultaneous translation.

More information from John S. Jackson, University of Kentucky, (606-257-3800 or 800-FULLMAN), Technical University of Berlin (030-302-5000).

Scientific Editors to Meet

The Second International Conference of Scientific Editors will be held in Amsterdam, October 13-17, 1985, sponsored by the European Science Publishers and the International Federation of Scientific Editors' Associations (IFSEA). Elsevier is celebrating its centenary and has been associated with books and publishing since 1950.

The theme of the Conference will be held in Amsterdam, October 13-17, 1985, and will be "Scientific Information Transfer: People, Methods, and Meanings," and the conference will be held at the Amsterdam Conference Center.

In addition to the scheduled seminars, JSDA, the Information Film Producers Association, will begin its national convention with a concurrent reception at the JSDA, and meetings are also planned by the Association for Multi-Image, the Health Education Media Association, and the International Television Association.

The VCC Exhibitions Hall will feature the latest in equipment and production services.

Obtain a full program brochure from VCC Conference Management, 500 Sober Street, Stanford, Connecticut 06901.

Security

The Third International Conference on Security Through Science and Engineering will be held September 26-29, 1981 in Berlin (West) Germany. It is being sponsored by the Technical University of Berlin.
Van Dinh Nhu Hoan. It is being offered by the Minister of Education and Science and the Ministry of Industry.

The full-day mid-week excursion (Wednesday, October 15) includes a visit to the flower auction of Almeida, a child's museum in Chartres, lunch in the restaurant of Chateaubriand and a boat ride on the Eure (former Saint-Pauline).

The Conference dinner (Thursday evening) will be held in the Eure restaurant.

One- and two-day post-conference tours of the Netherlands are available, and four 3- to 5-hour tours are offered for accompanying members.

For more information and forms for registration and accommodation reservations, please go to the Eure website.

**INTERMAG**

The next International Magnetic Conference (INTERMAG) will be held at the Assoua Congress Conference Center in Grenoble, France, from Tuesday, May 15 to Friday, May 18. This Conference is jointly sponsored by the International Research and Development Centre, the Société des Électrodes, des Électroniques (SÉÉ) in France and the Société des Électrodes, des Électroniques (SÉÉ) in the Netherlands. The Conference outside the USA continues a long-time triennial cycle which emphasizes the international community in applied magnetism, and in the choice of topics, the Society's original contributions of French science and technology are emphasized. In particular, the Society's contributions of the laboratories and universities of the USA are emphasized, and the area of the international community of research. The meeting will be held in a hotel, the prices of which are US$20 and $30 for US and Canada and Canada.

Send orders and inquiries (including requests for sample pages of the previous edition) to ATX-PAS, 109 Preston Street, Guelph, ON N1H 9X7, Canada. The price of the Director is US$22.00 (in USA) and Canada and US$25 (in Canada)

**Help Needed**

IEEE's editorial staff is asking for volunteers to help with papers written in English by authors who need English as a second language. Many papers approved for publication by virtue of their content are missed because of their linguistic quality. In short, they need a special kind of editing.

If you are interested in helping foreign authors, please write to B. K. Gerecht, IEEE Publication Services, 345 E. 47th Street, New York, NY 10017. Give your name and address to the editors at least one week before editing.

**Translators' Directory**

The American Translators Association (ATA) has published the fourth edition of its Professional Services Register, the most comprehensive listing of its type available in the USA, containing information on approximately 500 members of ATA who work in a total of 36 languages, from Arabic to Yiddish, in over 90 subject areas. The Translators listed served United Nations, US State Department, and embassies in many countries.

**IEEE Directors**

From Dr. T. L. Nagelhout, President of IEEE's Reliability Society, comes a request to endorse a particular interpretation of the term "Director" which has been submitted for the office of the Director, Division VI.

It is not the policy of the Society to accept candidates for election to any office, but Dr. Nagelhout's letter points out several subjects that all members of IEEE should be well to consider when voting for Directors.

First, he mentions the inherent internal problems related to the often conflicting interests and expectations of the Technical Operations Board (TIB) and the Group/ Societies/Councils. 4/26/84-11:00.

Another, there may be differences of opinion of the present Executive Council on US/EC to meet with the aim to have a new executive group.

Other questions arise also because of the US/EC to have a new executive group.

4/26/84-11:00: What is the solution to this problem? It is to have a new executive group.

**Management by Rejection**

It has been observed that modern management systems involve rejection of both the concepts of "say yes" and "say no" to the benefit of the employees. This is the approach of the new management system called Management by Rejection, more commonly known as the "PM by Rejection" system.

Causes for the increase in the use of the rejection of modern management systems, as they are the hidden benefits of the employee's engineering and management engineering management. Engineers, therefore, often find themselves in a state of flux, trying to be both productive and loyal to their company, while still striving to maintain a balance between productivity and profitability.

In the ideal Objectives environment—HID—personal at all levels of the organization create and accomplish the formulation and execution of the organization's long-term goals. Can you imagine the confusion of an eager young engineer who is expected to "be all things to all people"? Yes, but placed in an MB system where the goals are contrary to or so prolific, contradictory, and time-consuming as to be essentially unattainable? How does one apply Management by Rejection when there is no stall policy against which to measure deviations?

This is not to imply that Management by Rejection systems are erratic or illogical. On the contrary, they usually function with destandardized consistency.

Under MB, no one from the top down or the bottom up has a clear idea of directions to be taken by the system. Systems are created at all levels of management which cannot be accused of possessing excessive amounts of leadership, creativity, imagination, or aggressiveness.

The incredible result (universally denied) is that all of the fundamental, far-reaching concepts are achieved by the lowest levels of the MB organization.

Managers in the MB system, however, are not altogether detached from their "job". They have their "needs", and their selection is degenerate to the simple process of choosing between alternatives presented to the next lower level. In other words, there is a process of management involving rejecting options they dislike and allowing (if any) ideas to percolate up the chain.

IEEE systems breed two types of managers. The courageous support ideas they believe good and try to convince their supervisors, often with a vengeance. They have difficulty to define and to be in a goal-oriented environment.

Other managers, more politically oriented, tend to accept ideas their supervisors will endorse over their ideas that have not reached an acceptable level on what to endorse and change their minds faster than ideas are submitted.

And unfortunately, although the rejectors have a high turnover rate, they keep coming and coming.

In the engineering profession, too, and within and outside the organization, many people manage their professional lives by rejection—pursuing their own careers while rejecting potential involvement in the Professional Communication Society which offers benefits to all engineers who have anything to say.

Those who would like to formulate Communication Objectives are invited to write to an officer or any member of the Professional Communication Society.
Computer Utilities
by Ray Stephon

A computer system is composed of hardware and software. The hardware is the physical equipment, such as the computer itself (CPU) where the arithmetic functions are performed, and peripherals such as printers, terminals, etc. Software is the set of instructions that tell the hardware what to do and how to do it. New technology is continually updating and improving hardware devices and software packages.

Just as hardware and software are being continually improved, too are the applications of computer systems. The important applications of today's technology that the media calls a computer network. The computer utility concept has been around for years and has grown increasingly important. A computer utility is a computer program or service that is a large group of computer services by offering super-scalable computing power (the ability to perform millions of arithmetic functions per second) on a demand basis of storage, and data communication networks.

Computer utilities offer surmise real-time stand-alone in-house computer systems in capability. (A stand-alone computer is a discrete computer located at a specific location and used by a particular customer.) A computer utility behaves much like any other gas, or telephone utility offering a service. It furnishes all necessary computer services to a varied group of customers in a large geographical area.

For example, suppose that a computer utility's computer system were located in Allentown, Pennsylvania. A user in Baltimore, Maryland, could be a member of the computer utility's service and request computer power through telephone line, and have payroll computations performed in Allentown. The processed information would then be sent back to Baltimore where the computer owner would print out the statistical reports. This is an example of data processing.

At the same time, a user from San Diego could request a medical treatment treatment. The system would search its data banks and deliver the pertinent information on facilities hours, processes used, abstracts of papers written, etc. This is an example of information retrieval.

Computer utility services are offered by such companies as Control Data Corporation, Systems Development Corporation, Lockheed Space and Missiles Division, and many others.

Computer utilities will expand as business firms of all sizes become aware of the advantages of communicating with a supercomputer. In the large corporations, the ability to be computerized is expanding more than ever. [25] terminals are becoming more common referred to as data entry/operational devices. They can be of many types, for example, cathode ray tubes (CRTs) with keyboards, printers, readers, and punch-card equipment.

The system offers a great deal of operating flexibility. In some cases, the user can question a computer and receive responses—this is called a dialogue in an interactive mode. A "smart" D.U. (or terminal) contains a microprocessor that enables the user to perform some processing before communicating with the computer. An example is text editing.

"Smart" terminals become even more sophisticated, more local processing becomes available, and we enter what is known as distributed data processing (DDP). More on this in a future article.

JIR

The latest issue of the Journal of Computer-Related Results (1981), 98 (2), 1980 contains many important discussions of which a few are reportable as follows:

1. N. Bruss suggests ten methods for hunting lions in the Sahara desert. For example:
   a. Cost-Benefit Method—Those lions for which the cost of capture (all lost reading, docking, sweat, etc.) is greater than the benefits of remov-
      ing will give themselves up voluntarily.
   b. Utility Calculation Method—Those lions for which the cost of removing them will be less than that of being in a cage with a lioness and a guaranteed two pounds of meat per day can easily be persuaded to give themselves up.
   c. Method of International Diplomacy—It never works.
   d. Survey Research Method—Interview a random sample of lions, seeking in how strong the desire for freedom. The results can be used later to make policy decisions.

2. A. milliseconds of arithmetic functions per second. (A stand-alone computer is a discrete computer located at a specific location and used by a particular customer.) A computer utility behaves much like any other gas, or telephone utility offering a service. It furnishes all necessary computer services to a varied group of customers in a large geographical area.


Risk and Democracy
by David L. Bazeloon

The March 1980 issue of Technology and Society printed the text of a talk given at the Circuit Judge, U.S. Court of Ap-
peals, for the District of Columbia. Judge Bazelon spoke at the Annual Meeting of the National Academy of Engineering, November 3, 1979. A summary/com-
pendium of his address follows:

Because the health and safety risks generated by modern science and technology are unprecedented, the courts of the country in regulating these risks should be clarified. Some claim that existing regulations are too strict; others call it too strict; some want no regulation, others want more effective regulation.

The courts, however, cannot resolve technical disputes, for example, data analysis, theorology, and other specialties; the judges are not well enough-informed to establish allowable levels of exposure to radiation, for example. Can we make the courts critical value choice? Is the power for a court to the public, through its elected representatives in Congress, who should be the courts in practice? Or the Courc, for example.

The courts' role is rather to ensure that the decision-making of government agencies is thorough and fair. Agencies should be required to disclose evidence heard and policies considered, assumptions, doubts, and points of contro-
version. Then experts in universities, government, and industry can make quality checks; there can be open and public legislative review, technical evalua-
tion, and discussion of facts and decisions, expert and political debate, public education, even discovery of new data.

Courts can help to ensure that competent and objects are proximate, accurate, and are the exclusive treatment. They can, for example, calculate the cost of a new contract. The courts can grant that all relevant information has been considered. They can accommodate decision makers to the decision of explaining their actions. They can ensure that the issues should have been available to be speak and participate.

Such open and thorough decision processes can, in turn, make government more effective,mnor, and certain. The risks that important information will be overlooked or ignored. An open process can only inspire confidence in the unified and unbalancing but also protect decision makers from accusations of "cover-up."
Are Engineers Monsters?

Below is a combined and slightly edited version of a presentation printed in the American Society of Civil Engineers Newsletter for April 1992. The original speech was given by a faculty member of Columbia University's Department of Civil Engineering in New Orleans in December 1979. Morgan made two points:

1. The public thinks engineers are monsters.
2. Engineers should do something to correct this image.

He discussed these ideas as follows:

Regardless of what we engineers think of ourselves, the public does not. They are shocked at what many of us have found to be the view held by members of the general public.

They see engineers as incompetent polluters and immoral destroyers, insensitive to the ways of society.

They consider what we have designed: DC-10s that can crash, and submarines that can be recalled; military vehicles that are capable of destroying civilization in seconds with some vaguely defined military objectives; nuclear reactors that are the ones on Three Mile Island; industries that pollute our rivers, and air pollutants. They say that we spend our time going off to the moon and world the seemingly simple (to them) project of making solar energy economical.

They accuse us of participating in a conspiracy with big business, of aiding and abetting planned obsolescence.

They say that our technology shares in the responsibility for such environmental problems as yet unexplained. Our court reversed the agency's decision in order to permit a full inquiry.

My objection was not founded on any disagreement with the conclusion that nuclear waste disposal can be managed in such a way that it can ultimately be done. The objection was founded on the conclusion that it can ultimately be done within the constraints posed by the safety requirements of the agency, and that the manner in which the agency was conducted was unacceptable.

My criticism of the court's decision was that it gives the public the impression that the agency has been less concerned with the public's safety than it has been with the public's image of the agency.

We, the engineers, have a responsibility to the public to make sure that our decisions are in the public interest. We must do something to correct this image in order to maintain our credibility and our effectiveness as public servants.

Productivity

Items in the June 1996 Newsletter of the Industrial Relations Council point out two ways in which management can use productivity-boosting tactics as the alleged experts. These two ways are: 1) Improving the productivity of the employees and 2) Increasing the productivity of the equipment.

More and more executives are discovering that the profitability of their company is directly related to the productivity of their employees. Today, more than ever, the productivity of employees has become a critical factor in determining the success or failure of a company.
Nevertheless, the engineering profession's duty to the public is acknowledged in its critical role in engineering and is often referred to as the "social responsibility of the profession," which is defined as the duty of the profession to act in the public's interest.

6. Engineering judgments are critical, often difficult to assess, and often involve a high degree of uncertainty. Engineers must make decisions based on incomplete information and must consider the potential for harm to human life, health, and the environment. The engineering profession is committed to the highest ethical and professional standards, which include honesty, integrity, and accountability.

7. Engineering judgments are influenced by a variety of factors, including personal biases, cultural influences, and economic constraints. Engineers must be aware of these factors and strive to make decisions that are fair and impartial.

8. The engineering profession is committed to improving the quality of life for all people by providing safe, reliable, and sustainable solutions to society's problems.

9. The engineering profession is committed to continuing education and professional development to ensure that engineers have the knowledge and skills necessary to meet the challenges of the future.

10. The engineering profession is committed to diversity and inclusion, recognizing the value of diverse perspectives and experiences in problem-solving and decision-making.

11. The engineering profession is committed to the principles of sustainability, recognizing the need to preserve and protect the environment for future generations.

12. The engineering profession is committed to the principles of community service, recognizing the importance of working with communities to address their needs and challenges.

In conclusion, the engineering profession is committed to the highest ethical and professional standards, and to serving the public interest. Engineers must be aware of the challenges and opportunities that lie ahead, and must continue to strive for excellence in their work.

Thank you for your attention.

The End
Computer Utilities
by Ray Stephon

A computer system is composed of hardware and software. The hardware is the physical equipment, such as the central processing unit (CPU) where the arithmetic functions are performed, and peripheral devices such as printers, terminals, etc. Software is the set of instructions that tell the hardware what to do and how to do it. New technology is continually updating and improving hardware devices and software packages.

Just as hardware and software are being continually improved, so too are the applications of computer systems. The important applications of computers are those that are called a computer network. The computer utility concept has been adopted by many businesses and has grown increasingly important. A computer utility is a system of interconnected computers in which a large number of computer services is offered by supercomputer computing power (the ability to perform millions of arithmetic functions per second) and that can work within hours, not days or weeks.

The latest issue of the Journal of Research and Development contains many important papers, of which a few are reportable as follows:

1. A. B. Steen suggests ten methods for hunting lions in the Sahara Desert. For example:
   a. Cost-Effective Method: These lions for short hunting periods of up to 10 days, running, dodging, or using a large gun.
   b. Utility Calculation Method: These lions for when the utility of each hunting period will be less than that of being in a cage with a lioness and a guaranteed 2 pounds of meat per day can easily be persuaded to give themselves up voluntarily.
   c. Method of International Diplomacy—It never works.
   d. Survey Research Method—Interview a random sample of lions, asking them how strongly they would prefer... psychological techniques (e.g., "force of grip") for lions who won't talk.
   e. Method of Clostrium—Incite a computer file containing data on captured lions (name, number, sex, location, hunter, etc.) to show that Big Game Hunting is no problem.

2. Steve and Justin Schuck discuss "Seasonal Egg-Scattering Behavior of Female Opossum, the Eastern Banded.

Development Corporation, Lockheed Space and Missiles Division, and the Sandia National Laboratories.

A third set of subjects for consideration consists of the activities and local affairs of Chapters and Sections, and a fourth, less important, of relationships on the international level.

A first Director will have had experience in developing large software systems, but perception and insight can be acquired through other kinds of experiences. Consider the educational backgrounds of all candidates for Division VI Director and vote according to your best judgment, POE.

Risk and Democracy
by David L. Bazelon


Because the health and safety risks generated by modern science and technology are unprecedented, one of the goals of the courts in regulating these risks should be clarified. Certain claims that are considered regular, others call it too strict; some want no regulation, others want more effective regulation.

The courts, however, cannot resolve technical disputes over the protection of the public, nor can they make scientific decisions, nor can they make decisions on political value choices. But to protect themselves, and the country, the courts, experts cannot, and should not, arrogate the decisions to themselves. Public confidence is possible only if experts accept the difficult tasks of explaining what they know and do not know, and how they balance risks and benefits.

Engineers may feel ill at ease with this message, for they are accustomed to making private cost-benefit analyses. But today, when the consequences of engineering decisions are unprecedented or undefined, when safety, health, and the environment are the paramount concerns, the courts must also look at the costs and benefits and at the public's access to the judicial process.

More specifically, engineers are often reluctant to reveal design defects to their employers—a defense in a lawsuit or the loss of a contract. The courts could force these engineers to produce this information, but it is doubtful that the public could compel the courts to do so. More likely, in the absence of court intervention, engineers might reveal this information.

The courts are guided by the principle that the rules must be clear and certain, but this does not mean that the rules must be certain. The courts must be flexible in their interpretation of the law, and they must be willing to consider new evidence in light of new developments in the field.

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Help Needed

IEEE's editorial staff is asking for volunteers to help with papers written in English by authors for whom English is a second language. Many papers approved for publication by virtue of their content are marked for grammatical polishing. In short, they need a special kind of editing. If you are interested in helping foreign authors, write to E. K. Graffieti, IEEE Publication Services, 345 E. 47th Street, New York, NY 10017. Give your name, address, phone number, and interest in helping the authors in the area of your engineering knowledge or expertise, and any other qualifications or languages that you are familiar with.

IEEE Directors

From Dr. T. L. Nagelhuis, President of IEEE's Reliability Society, comes a request to ensure adequate representation of the IEEE who has been nominated for the office of Director, Division VI. It is not the policy of the Society to offer candidates for election to any office, but Dr. Nagelhuis' letter points out several subjects that all members of IEEE would do well to consider when voting for Directors.

First, be aware that there are inherent problems related to the often conflicting interests and expectations of the Engineers and students of the Technical Operations Board (TAB) and the Student Societies/Councils. Second, the TAB and the TAB-sponsored standards need to be brought into larger harmonisation with existing standards, which may involve some additional costs.

Other questions arise also because of space or cost consideration, some of the 1/4/5/6 issues need to be modified in context, and the IEEE is concerned with the housing problems of overseas members.

The General Conference on Management by Exception has noted that modern management methods, such as the concept of "Flexible Bounded Exception Handling" and "Management by Exception" in consultation with the Paris-based Professional Communication Society which offers benefits to all engineers who have anything to do with communications.

In the Ideal Objectives environment-MBO—personnel at all levels of management are encouraged to take full responsibility for the results of their work. Can you imagine the consequences of an inordinate amount of management, if placed in an MBO organization? The goals are no longer to control, or control, or be flexible, contradictory, and time-consuming as to be another illusory substitute? And how does one apply Management by Exception when there is no stable plan against which to measure deviations?

To this is not to imply that Management by Exception systems are erratic or illogical. On the contrary, they usually function with devastating consistency.

Under MBO, no one can top the top or the bottom up has a clear idea of direction to be taken. MBO systems and MBO levels of management cannot be accused of possessing excessive amounts of leadership, creativity, imagination, or aggressiveness.

The incredible result (universally denied) is that all of the fundamental, far-reaching concepts created in the deepest bowels of the MBR organization.

Managers in the MBA system, however, are not always the same people who hold the same positions. Their education is severely restricted, and their decision-making is degraded to the simple process of choosing between alternatives presented by the next lower level. In other words, there is no chance of management invoking rejecting options they dislike and allowing few (if any) ideas to percolate up the chain.

IEEE systems breed two types of managers. The courageous support those ideas they believe good and try to convince their supervisors, who often fail because they are difficult to define and defend in a goal-less environment.

Other managers, more poorly oriented, tend to support their superiors, who believe their supervisors will evaluate their ideas. They often fail because they have not reached a consensus on what to evaluate over and change their minds faster than ideas are submitted.

And unfortunately, although therejectors have a high turnover rate, they keep coming and coming and coming.

In the engineering profession too, and within it, the many people manage their professional lives by rejection-pursuing their careers while rejecting participation in the Professional Communication Society which offers benefits to all engineers who have anything to do with communications.

Those who would like to formulate Communication Objectives are invited to write to an officer of the Professional Communication Society.

Van Dong Namm. It is being offered by the Minister of Education and Science and the Municipality of Amsterdam.

The full-day mid-week excursion (Wednesday, October 15) includes a visit to the flower auction at Alkmaar, a chance of a leisurely walk in Harlem, lunch in the floating restaurant and a boat ride on the IJsselmeer (former Zuiderzee).

The Conference dinner (Thursday evening) will be held at the Elkskamp offices.

One- and two-day post-conference tours of the Netherlands are available, and four 3- to 5-hour tours are offered for accompanying persons.

For more information and forms for registration and accommodation in The Netherlands, Elkskamp Services, P. O. Box 2090, 3000 CA Amsterdam, the Netherlands. Completed forms should be returned before August 15, 1990.

INTERMAG

The next International Magnetics Conference (INTERMAG) will be held at the Alps Congress Conference Center in Grenoble, France, from Tuesday, May 16 to Friday, May 19, 1989. This Conference is jointly sponsored by the Magnetics Society of IEEE, the Société des Électriciens, des Électroniciens et des Radio-Techniciens in France and the Société des Électriciens, des Électroniciens et des Radio-Techniciens in France. The Conference will be held in the city of Grenoble, one of the most beautiful cities in the area of the meeting is held. Additional information and addresses may be obtained from the Co-chairs of the Conference, Dr. J. J. M. Kraakman, Centre d'Etudes Nucléaires, P.O. Box 1, 3804 CERN, Geneva, Switzerland.

Translators' Directory

The American Translators Association (ATA) has held its fourteenth annual conference in New York City, under the auspices of the ATA, the most comprehensive listing of its type available in the USA. The catalog contains information on approximately 300 members of ATA who work in a total of 95 languages, from Arabic to Zulu, in over 87 subject specialties. The translators listed have worked in the United States and in many foreign countries. Members have passed the ATA Accreditation Examination in various combinations are given specific identification. The Directory is useful to those who have the need for language service in any area of science and technology, business and commerce, or the arts. If you are looking for translators who are familiar with a particular field, you can be offered advice on the best possible translations. The Directory is available at most large bookstores and libraries. It contains language and index entries for use in matching persons and jobs.

PREVIOUS VOLUME

Previous editions of the Directory, published in 1986, 1979, and 1976, were in these MBO methods captured by business, industry, libraries, and universities.

Send orders and inquiries (including requests for sample pages of the previous edition) to ATA-PMS, 109 Doren Street, Gienau, New York 10060. Tel: (914) 841-1500. The price of the Directory is $22.50 (in the USA and Canada) and $25.00 (in foreign orders).

3. B. S. Felten writes about using a statistical procedure called "Screening Surface Analysis" to study the properties of two drugs injected intravenously into male rats.

Treatment rats were kept near a heater, control rats near an air-conditioning unit. The highly trained technician gave four favorite animals the In- dignity and injury of the drugs and occasionally introduced female rats into the cages. When two rats were listed on an entry for "Sex escape," a small terrier was substituted for them and his urine was later used to represent that by other rats.

Unfortunately, the dog died before the experiment ended, but the missing observational data were estimated.

The statistician was delighted with the data, particularly after he deduced that several nominal high values, certainly must have been influential (or resulted from the influence of inadvertent littermates). By the careful rearrangement of some observations...he was able to produce a truly artificially significant result for the "sex escape surface" which demonstrated the effectiveness of the drugs and obtained government approval of their use as a drug in human beings.

Everyone involved in the research received substantial royalties and the statistician became Director of the pharmaceutical company.

4. In a paper that has no significance whatsoever and is therefore timeless, "H. E. Q. Pilman describes how he derived Pilman's Law: "It always takes longer." Data were obtained by observing the disparities between time allotted to complete a project, and the time actually used. His "open-ended" statistics show that for 45 of the average time for completion was 15 months and for 30 percent that the average actual time was 5 months.

5. J. K. Weirig suggests that an article might be written about "The Effects of Abortion on Reproduction."
Interview with PC's President
Bertrand B. Pearlman

The following is adapted from an account printed in the Star Trekker Engineering Newsletter for January 1980:

"The most important thing to remember," says Pearlman, "is that the organization and scheduling you can accomplish even more than you had hoped. Of course," he adds with a twinkle, "it helps to be chairman of some of your 'outside' associations, because then you can delegate authority, and authority, and authority, and authority." Pearlman is the manager of Design Engineering at the Doob Fegg site of Star Trekker Engineering Company, lives by the hour, indeed, accomplishes, leads, creates, and directs, to an almost unbelievable degree. A graduate of the present Polytechnic Institute of New York, with a Professional Engineering License from the State of California, he joined Star Trekker in 1965 as Principal Electrical Engineer after several years in the world of consulting engineering. Now, with 40 regular employees in his department, as well as some 35 to 50 temporary at any given time, engineering is logical and covers periods in design, he supervises, instrument, electrical, mechanical, architectural, civil, structural, piping, utilities, plant layout, and vessel engineering functions. In addition, he is chairman of Star Trekker's Engineering Standards Committee, responding to the government's regulatory agencies and the evolving technical needs of the Engineering Department, and an active member of the League of Women Voters.

The Pearlmans have four sons-two sets of twins. The younger boys are sophomores in high school, one of the 12-year-olds is working toward a degree in biological research and the other a future in physics. Both of the older boys have reached the rank of Eagle Scout. Pearlman confesses to a love of classical music and to tennis and occasional soccer, and he is now learning to play the organ he recently built for the Pearlmans home in Doob Fegg.

The IEEE Other societies to which he belongs are the American Institute of Chemical Engineers, the Instrumentation and Measurement Society, the Society for Technical Communication. He was recently recommended for inclusion in Who's Who in Engineering.

His list of memberships in non-professional associations is long also. Pearlman is a director of the Boy Scouts Association of America, an executive member of the Engineers Council for Professional Development, and a member of the u.s. National Academy of Engineering, and the National Academy of Sciences.

The most important thing to remember is that the organization and scheduling you can accomplish even more than you had hoped. Of course, it helps to be chairman of some of your 'outside' associations, because then you can delegate authority, and authority, and authority, and authority.

Pearlman, who has a Bachelor's degree in zoology and a Master's degree in education, has been in the field of education for 15 years, teaching at the University of California, Berkeley, and is currently doing research there on the major events each year (plastics, parties, alumni, as well) as providing small gifts and celebrating birthdays.

"Every major department needs a community that's tremendously rewarding."

Pearlman's wife, Joan, has a Bachelor's degree in education and is a city teacher. They have four children-two sets of twins. The younger boys are sophomores in high school, one of the 12-year-olds is working toward a degree in biological research and the other a future in physics. Both of the older boys have reached the rank of Eagle Scout.

Pearlman confesses to a love of classical music and to tennis and occasional soccer, and he is now learning to play the organ he recently built for the Pearlmans home in Doob Fegg.

VCC/West

The VCC/West, located in Los Angeles, is a community of engineers and technologists interested in the latest developments in computer science and technology. The VCC/West holds monthly meetings featuring guest speakers and panel discussions on a wide range of topics. The organization is organized to foster the exchange of information and ideas among members and to promote the advancement of computer science and technology.

SCIENTIFIC EDITORS TO MEET

The Second International Conference of Scientific Editors will be held in Amsterdam, October 13-17, 1985. The conference is organized by the International Association of Scientific Editors (IASA) to provide a forum for the exchange of ideas and information among editors of scientific journals. The conference will feature plenary sessions, workshops, and poster sessions on a wide range of topics, including publishing and editing, authorship, peer review, and ethics.

Security

The Third International Conference on Security Through Science and Engineering will be held in September 1985 in Berlin. The conference is organized by the Technical University of Berlin and will focus on the latest advancements in security technology and the role of science and engineering in ensuring the safety and security of individuals and communities.

The conference will feature plenary sessions, workshops, and poster sessions on a wide range of topics, including forensics, surveillance, and cybersecurity. The conference will bring together scientists, engineers, and security professionals from around the world to share their latest findings and insights on the latest advancements in security technology.

The conference will be held in the Technische Universität Berlin and will provide a platform for the exchange of ideas and information among contributors and participants.
From Edy Schlesinger to all PCs:
In FTC's Newsletter for December, 1975, an item called "Request for Help" appeared among letters to Julian Seale, our House-Study instructor in Israel. Alla Smuts and, responding by mailing a similar proposal from the Society for Technical Communication. Can you help too? See Julian's address below. Attitudes and applications were discussed by publishers, researchers, editors, professors, printers, librarians, consultants, marketing managers, and computer specialists.

SSP

The Society for Scholarly Publishing

recognizes

IEEE Professional Publishing Community

as a Charter Member

supporting the advancement of the arts and science of communication among scholars

The Society for Scholarly Publishing held its Second Annual Meeting in Minneapolis, June 2-4, 1975. The theme of SSP was "Scholarly Publishing in an Era of Change." In particular, the interaction between professionals in all aspects of publishing and technologies created to assist them. Attitudes and applications were discussed by publishers, researchers, editors, professors, printers, librarians, consultants, marketing managers, and computer specialists.

The following figures on PCS membership appear in the Annual Report of IEEE's Secretary-Treasurer for 1979:

Member by Grade

Affiliate by Region


Issues 240 Papers 50

Pages 7

New Drama by Lufkin

JAMES M. LUFKIN

Jim Lufkin—long-time PCS member, past president of PC's AdCom, author of scholarly articles and tutorial essays on technical communication, and "founding father" of the Association for Scientific Journals, "godfather" of the Society for Scholarly Publishing, and editor of Scientific Correspondence—has written a new play. Jim's latest, The Fatal Slide, was billed as "a film-studio play...a true case history of one of SSP's recent meetings in Minneapolis, where it was presented for the first time. To the scholarly and their publishers."

In the single performance, Jim himself took the part of Dr. Jones, the Author, who makes an inauspicious presentation of his illus-

trated by even more incomprehensible slides. He is speaking in an essay for the Journal of Absolute Truth. The other characters are the Editor, Sally, and two named Rothschild, "as the plot unfolds, reveal blood, murder, mental anguish, and finally their pseudo-scholarly identities."

The Author's first slide is a ridiculously crowded confusion of black spots and dashed-line connections. His next slide is a page out for each one.

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The Author's first slide is a ridiculously crowded confusion of black spots and dashed-line connections. His next slide is a page out for each one.
In its situation, we devised operating signals under pressure and under the threat of pain, with a real appreciation for safety and efficiency. It was found that only four OP signals were needed. The first is one that says "an," "lump," "tumour," or the like. The second is an operational signal of the negative. For this you should use any one of the OP signals: single digit, the middle finger, or the index finger. The third is the simple word "yes" or "no." The fourth is the simple word "conceal." The fifth is a simple two of anything - the most obvious signal except for the single beat "an." The third necessary signal is "repeat," which was then for us. And the fourth is "wait" - four beats or four "whatever you" in our general.

In seven and a half years of communicating solely by some application of five by five matrices, I saw only one of my 400 companions experiment a need for another operating signal. That fact alone could well have been considered a medical breakthrough. One quickly realizes that the need to protect the channel is far greater than the need for a period of months and maybe years (as I had been) and suddenly get back to it and want to establish contact, you learn to be cautious about making a conversation. You learn to slow down and, first, agree with your partner about danger signals; second, you agree on a cover story if you are caught off guard; third, you need to decide on a becky-compression situation. The first is in the first five minutes of contact to say what happens "when we lost this". You make a second one that you might explain to a queer who indicates a holding place for a note or a secret conversation. You plan to go in and put it on a map, but to ignore the need to establish hallucination procedures for use in the mean months of communication interruption.

You are probably wondering at this point, "How in the hell is he doing this without his map and matrix without prior knowledge?" That is a good question. It is based on a theoretical and practical problem. Sometimes you can stick notes of code in places of cover and serve, sometimes you can whisper under doors. One of my friends knew the matrix found on the back of the cell block for the first time. He explained that he saw it when forced to go into the cell and open the door next to him. The matrix was diagrammed on the bottom of a table with the annotations. All prisoners knew this code. The others were not aware of this, but they had to wait until the new prisoner had overheard his mental computations over the bars of the cell and then changing it. (He would have been threatened with going through the future life again if he broke silence.) The new prisoner had to decide to "take a chance" and hope that he was not a guard and the prisoners were not into violating the camp rules of absolute silence. For some to overcome such problems took months, for some days and for a very few, hours.

Experience was not even the most sluggish element. The combination of the two was laying times on the wall. In a matter of minutes, hours, days, weeks and months, the code was learned by the students; the person on the other side realized that you were communicating. The code eventually made a small kind of recognition signal of his own design and let you know that someone was using a map. That this communication is fundamentally the connection of one brain to another and they exchange messages of thought is a very simple system and do not sell your brain short. It can be done better than that. But this message is better than the artificial intelligence designer thinks. One of the many things we are working on is talking about an information signal. The two main signals are probably the first and 3 is probably "2." If this understanding was slow to develop it was to be patient with your partner all "8" and then a pause and then a "7." The next one is "Hi." Then you are in business - an information line. But it is rather crude and is seen as a pea brain.

Procedure

But how did we call them up? How did we "nect?"

What was the procedure? We knew that we borrowed from a very American rhythm pattern for a call-up signal the "shear and baricat." When an American

Saratoga

KIEPR

R. J. Lee

Y. J. Tan

J. C. Gin

L. Y. Chia

M. Y. Teo

KAPLAN

M. A. Garcia

V. N. Perez Finozas

J. V. Nunez-Bichos

MEXICO

S. A. Garcia

R. D. Lopez

S. L. Ruiz

R. S. Musraki

REPUBLIC OF THE PHILIPPINES

L. A. Romana

A. A. Rosario

E. B. Torres

P. A. Dreyer

NYSA

J. W. Smith

S. M. Tsukahara

A. V. Okada

Districts of Columbia

J. R. Jones

D. A. Watson

Vancouver

C. H. Young

S. H. McCall

A. M. Tsyborski

Kuwait

A. M. S. Al Bahr

C. C. Thiele

A. E. Ron

F. A. Tisdall

New Hope

You may find the worst enemy or best friend in yourself.

—English Proverb

India

J. C. Hilton

New York

S. D. Dyer

E. H. Foster

Japan

K. N. Sato

S. T. Nakamura

K. S. Sakaner

Switzerland

K. B. Schaller

E. M. Wickersham

Switzerland

S. M. B. Burk

G. S. Kelly

J. G. Kassian

United Arab Emirates

U. E. S. H. Alshahristani

A. Juma

A. Ragusa

United States

A. A. Schriever

N. S. Truex

N. W. Jones

Maryland

T. V. Compton, Jr.

A. S. Knudsen

W. D. Little

Michigan

E. S. W. Helper

W. G. Wright

H. V. Nyugen

"Unemployment is a full-time job," he laments, but what seems to him the most is the fact that French stores no longer sell Prince Albert tobacco.

Intercepted Letters

From Julian Zeiler, Israeli POW, to Della Wiltz

Just received the two books you sent. I truly appreciate the fact that you took the trouble to wrap and mail something that you took your request seriously.

I am hungry for magazine articles on technical writing, editing, management, teaching, graphics, etc. I really need periodical publications.

Again, many thanks, I would like to hear from more of you professionals.

From Della Wiltz to Emily Schledinger

Please put another item in your PO's Newsletter to say that Julian Zeiler still needs articles and books on engineering and technical communication, or news on such material. He finds it difficult even to become aware of available information. That would receive PO publications but is sure that odds would be helpful also.

Ask POW's to clip or copy articles or book reviews and send them to Julian Zeiler, 13 Fincher Street, Apt. 6, Novi, Israel.
Welcome, New PC-ers!

Welcome to 73 new PC-ers who joined us in April, May, and June—31 from the United States and 31 from other countries. We hope that you will be active rather than passive members. As a start, send us a comment or address changes to the front of Transactions and Newsletter or care of IEEE in New York City.

PC-er to INTECOM

ROBERT L. MOUNT

Bob Mount, of the Institute of Gas Technology in Chicago, will represent PCC at Form 780, the second conference of the International Council for Technical Communication, August 24-27, in Ilehammar, Norwary. The account of the meeting will appear in our next Newsletter.

Bob joined INTECOM in 1972. As Senior Advisor, Technical Writing, he writes, designs and manages the production of several publications on such subjects as coal liquefaction and gasification, oil shale development, synthetic fuels, fuel cells, and world energy resources.

His early technical work included engineering and research publishing in the areas of atomic, biological, and chemical warfare for the United States Army and in guided missiles and countermeasures research for the United States Navy. He was a naval aviator and flight instructor during World War II.

Bob's activities have included technical reporting on oil and the construction of pipelines, engineering, physical sciences, biomedical, industrial processes, metals, machine tools, electronics, and technical management. From 1965 to 1973, he wrote approximately 250 technical articles for an international clientele that included IBM, Siemens, the Engineering News Record, Science Progress, and Engineering. His administrative positions have included staff posts as assistant city editor for two metropolitan daily newspapers, managing editor for two technical magazines, and editorial editor for seven journals.

Bob studied industrial engineering at Lehigh University, received his B.S. in Journalism from the University of Utah, and took graduate courses at the University of Utah and UCLA. Later, as a Sloan-Fellows Scholar at Columbia Fellow at LLL, he completed a postgraduate-level course in advanced scientific writing.

A Senior Member of the Society for Technical Communication and a Member of the American Association for the Advancement of Science, Bob recently became an Affiliate Member of IEEE. As a Senior Advisor, he will present a paper on "Technical Communications from the Silicon Valley to Saturn: Apollo...What's Tomorrow?" He hopes that it will stimulate introspection among international communications and inspire the establishment of a general newsletter.

Bob's hobbies are sailing, scrabbling, and leather work. By force of their united opinion, his wife, two grown children, and six stepchildren not only convinced him that he should sign up for INTECOM's post-conference bus tour instead of flying back to, and back from, the conference in Norway.

Summary

Why did I say earlier that we communications when immersed in the technical world, do not give enough credit to the human mind? First of all, we communicate mainly by always looking for a perfect system. A perfect system serves all—there is no child is a lot of wisdom in Admiral Gorbachev's system that. The best is the enemy of the good.

Secondly as I said, I believe that an overcritical communications from the top down is dangerous to military men. Habits. I recently told the Marine's Academy in a speech that I think there is a great possibility of their having to depend on their own initiative and their own initiative in an "out of communications" situation that was necessary for my generation especially because of the probable difficulties of radio communications in modern war.

You have to get then through the possibility of a communications breakdown, to a point where when our officers are brought up in an environment of internal communications you have in a zero market. They must think of our policies because they had been conditioned by good communications for years to be at ease when they were not able to "phone back" with headquarters. Imagine it—we're in a position where we know more about how to run a prison organization than we know about the police line and our line people, and our line people are depending entirely on our own spontaneous initiatives.

Thirdly, I think your whole profession because it seems to ignore Shleifer's and other strategies, adrenalin to me the baby; the technical advantages of being out of communication. Think about it. If it is remotely clear to your officer that you are completely out of communication, there is no way he can see you all as an ultimatum. There are advantages to a commander when he knows he cannot be contacted. They cannot ask for re-

Useful Be's

Work with ten Be's as you begin to communicate:

1. Be ready to speak. There's nothing as nice as a cheerful word of greeting.
2. Be ready to smile. It takes 72 muscles to frown and only 14 to smile.
3. Be ready to call people by name. The greatest music to anyone's ears is the sound of his own name.
4. Be friendly and helpful. If you would have friends, be friendly.
5. Be sincere. Speak and act as if everything you do is a genuine pleasure.
6. Be genuinely interested in people. You can learn to like everybody if you try.
7. Be generous with praise, cautious with criticism.
8. Be considerate with the feelings of others. It will be appreciated.
9. Be thoughtful of the opinions of others. There are three sides to every controversy—you, the other fellow, and the right one.
10. Be alert to give service. What counts most in life is what we do for others.

---Adapted from Aerospace and Electronic Systems Newsletter (January 1980)

New Scrambler

A group of U.S. inventors has patented a device called the Phasor, which can protect private telephone conversations and business radio transmissions at a much lower cost than voice scramblers now in use. Signals scrambled by Phasor cannot be unscrambled without another Phasor and the applicable code for setting it.

Existing scramblers cost several thousand dollars a unit, but the inventors expect the Phasor to be sold for only several hundred.

---Information from the Newsletter of IEEE's Aerospace and Electronic Systems, June 1980

Course or Self-Study

William A. Hamner is the author of a 3-hour course, Effective Presentation, which is also available as a programmed self-study kit in the Professional Development Series. The course consists of ten units, all but one of which are divided into several segments:

1. Personal Communication—acquiring a communicator's perspective and a philosophy of communication
2. Structure and Thesis—understanding the principles of logic
3. Kinds of Structure—learning how to combine ideas
4. The Functional Approach—establishing a purpose
5. Idea Support and Reinforcement—learning how to handle detail
6. Outlining and Data Gathering—collecting and organizing information

---William A. Hamner
Computer Take-over?

What will computers do next? Recent articles describe mechanized capabilities as follows:

1. 

**Papering** (The Editorial Eye, May 1979)

If a document is written in IBMsono Technical Language (basic and specialized vocabulary), a program written in IBMsono quality checking test editor will flag such errors as

- length of sentences
- inability to incorporate sentences
- ambiguous word meanings
- passive verbs
- unclear reference of previous noun clauses

improper or non-long modifiers

2. **Typing** (Software Magazine, March 1980)

Option, a device developed for ambidextrous people, takes eye movements. The "typist" looks at letters of the alphabet in a desired manner, and the machine translates the words that "spelled out." A speed of 18 words a minute has been achieved.

3. Reading (SoftwareMagazine, March 1980)

If you place an open book face down on the Kurzwell Reading Machine, a synthetic voice will read the words to you in imitation of natural speech.


A computer has been used to signal the presence of a newly identified brain wave called N400, which occurs when the human mind tries to understand nonsense. For example, the sentence, "He spread eggs on his bread," evokes the N400, but a misprinted word does not. Because of its ability to recognize the N400, the computer can be used as a diagnostic or research tool in the investigation of verbal skills, learning and reading ability, and the creative use of language.

5. Providing a line of office services

Computer systems exist which will receive a document or dictation, return the material typed with words spelled correctly and layout as specified, clear copies, issue a typescript, run the social impact of computing technology, apply to a library, and provide tape, microfilm, and disk storage.

---Information derived from The Editorial Eye (May 1980).

Fumbling Fixtures Revised

(See April Newsletter for Fumbling Fixtures)

Fumbling fixtures are funny because each one illustrates the error it aims against. The revisions suggested below express the "rules" correctly, but represent as well a well-considered purpose in a particular occasion, almost any such rule can be broken.

- IEEE Professional Communication Society Newsletter is published quarterly by the Professional Communication Society, a society of the Institute of Electrical and Electronics Engineers, Inc. 345 E 47th St, New York, NY 10017. It is available without additional charge to each member of the Professional Communication Society. Printed in USA, Professional Communications is published in New York, NY, and on additional copies for members of the Society. IEEE members are welcome to circulate and reprint material from it. Please acknowledge the IEEE Professional Communication Society and the original source cited.

- PC in the UK

Both of the last two meetings of PC in the UK Conference had television as the main theme and were held at the Institute of Electrical Engineers in London. In November 1979, Mr. G. B. Townsend, Head of Information Services of the Independent Broadcasting Authority, spoke on the subject "On Broadcasting Commercials!"; he discussed some of the criticisms directed at the present use of television and radio and referred to the effects of engineering developments like interactive facilities on the potential of broadcasting. Mr. Townsend concluded that the many sociological implications of such developments may prove difficult to control.

In the Speaker in May 1980 was Mr. D. P. Leggett, Head of the Engineering Information Department of the British Broadcasting Corporation. Mr. Leggett discussed B.B.C.'s policy of giving information to the general public, and the nature and scale of the communication of information within the Corporation. His concern was not as an engineer, but as a society's representative with the assurance that information is communicated internally and externally to provide a service of maximum efficiency with minimum cause for complaint.
The letter from P. N. Applegren of Sweden (ACM Item #5) has been much on my mind. He writes that he finds P.C. publications interesting and helpful, but that our projects are not very useful to a Swedish sensibility.

Indeed I do understand. But I have wondered for some time what we can do that would be useful, and I realize that if I'm going to seriously consider any rational suggestion. The question, "How can we help?" has been asked many times, but no one has made any answer.

With the establishment of INTERCON, however, and the increased number of international meetings conducted in English, there may be some widespread desire to upgrade skills in using this language.

PC's New Study Group effort might appeal to those who have considered communicating with a trans-national audience or to those who work in a trans-national organization. And managers in trans-national companies might consider having Ken Billing present the Workshop for selected employees.

What else can PC offer non-US PC-ers? Or are the eight-yearly publications issue sufficient? Editors and officers will welcome your communications.

Ron Billing has been involved in technical writing for almost 20 years. His background includes 10 years as an aviation officer with the Royal Air Force in Britain, 10 years as technical editor and training coordinator with the Electronics Division of DDI Industries in Canada, and 15 years as an instructor of technical report writing at Red River Community College in Winnipeg, Manitoba, Canada.

Ron is head of the Department of Industrial and Technology Communications at Red River College and dean of The Tutoring Group (communication consultants). Chairman of PC's Education Committee since 1972 and recipient of PC's Gold Medal in 1979, he wrote the home-study course and workshop that PC sponsors and has organized their presentation from the beginning. Both are based on his text, Technically Correct: A Tool for which a second edition is now being printed.

Dave Crocker holds a BSEE Degree from MIT and is a Registered Professional Engineer in the Commonwealth of Massachusetts.

For the past 30 years he has served with the Charles Stark Draper Laboratory, Inc. in Cambridge, Massachusetts.

Be careful, however. Breaking a "rule" often leads to disaster especially if the violation itself is so startling as to detract from its intended purpose. Try to get unusual effects "legitimately." Don't use sentence fragments. Proofread carefully to see if you left any words out. Don't use commas that are not necessary.

Repetition can be eliminated by re-reading and re-editing.

Writers must not shift point of view. Don't write in dialect. Don't begin a sentence with a conjunction. Don't use exclamation marks. Place pronouns close to their antecedents. Use hyphens sparingly. Write adverbs correctly. Don't use conjunctions in formal writing. A careful writer avoids dangling participles. Don't use old-fashioned words or phrases. Never split an infinitive; or Remember, never split an infinitive; or Remember, never split it.

Don't write run-on sentences; they are hard to read. Don't use double negatives. Use the semicolon properly; it serves best to mark a pause between two closely related sentences.

Reserve the apostrophe for its proper use; omit it when it's not needed.

Write passive rather than negative sentences. Verbs to agree with their subjects.

To end a sentence with a linking verb is sometimes thought improper.

Don't use incorrect verb forms that have sneaked into a sentence. Use correct verb forms.

Don't mix metaphors.

Don't use slang or jargon.

Don't be redundant.

Writers should use singular pronouns with singular nouns in their writing; or Pronouns should agree in number with the nouns they stand for.

Don't exaggerate.

Use alliteration for special effect only.

Don't write several prepositional phrases in a series. Use correct tenses. Don't use quotation marks that are not necessary. Don't use clichés.

Worst Sentences

In every 8 digits of the X sequence on digit 0 is replaced by the frame digit, (x) digits are used to screwed the date, only one digit is preserved during transmission, namely.

In every (P/2) product between the element, f(x) and in the element, f(x) is the element, a1.

If we lift this digit out of every 8 digit of the transmitted data sequence and from a sequence.

Thoughts on Format

In July 1979, Edward Arnold, author of three books on graphic arts, took part in a workshop at a convention sponsored by Agricultural Communicators in Education, and a report of his remarks appeared as "Graphic Overviews" in the ADE Quarterly (July-September 1979). The paragraphs below present some of his ideas briefly:

You cannot make a fish bite on a hook, and you cannot make a reader read your printed communication. But you can put on "enough warm words" to land the fish, and you can use techniques of "functional typography" to coax potential readers into receiving your message.

Therefore, consider these aspects of print media that affect readers' ability to "stay with it":

- The mechanics of reading—the knowledge and experience needed to decode all the linguistic shapes of letter and arbitrary relationships of grammar into what the reader finally "receives" in the first place.
b. The psychology of reading—the attractions and deterrents that encourage people to read and "read on" or repel them from beginning to read and "turn them off" in mid-sentence.

c. The economics of reading—the problem of money and timeliness involved in producing and purchasing "hard copy."

The idea of 'functional typography is that every element on a printed page must do a useful and necessary job in one or more of these areas of getting people to "stay with it."

Non-Functional elements are non-functional elements.

In a given instance, for example, should the type be large or small, plain or elaborate? What about format and spacing? What about headings, paragraphs, justification, pagination, illustrations? Balance white space with text space; put headings, not above, graphs, pictures, and tables.

Nothing will guarantee 100% readership, and getting 80% is a minor miracle, so fight for individual readers. Each reader has only a certain amount of time that he will devote to any publication. "When that time is up, whether it has been used productively or whether it has been wasted—does that time is done, is he done. Whether he is on page five or page 55 or anywhere between, this is it."

So be sure that every typographical element "works" to keep readers with you. Make each page look inviting and uncomplicated. Don't force the reader to guess, don't let him feel confused or tired or even the least bit bewildered.

Remember, you are competing for every reader's attention against every piece of printed matter that comes into his house or his office. Love readers, like fish, with "wars words" and careful preparation.

Washingtonese
From a House Bill on a tax revision law:

If any credit allowed for any taxable year is increased by reason of a credit carryback, such increase shall not affect the computation of interest under this section for the period ending with the last day of the taxable year in which the credit carryback arises, or, with respect to any portion of a credit carryback from a taxable year attributable to a not operating loss carryback, . . . such increase shall not affect the computation of interest under this section for the period ending with the last day of such subsequent taxable year.


Eh?

The thesis of this essay is at the same time straightforward and radical. I suggest that a heretical phenomenon of communication stands dialectically juxtaposed to a logical positivism of communication such that the former functions as a presuppositional critique of the latter.


Ad Com Meeting

Members of IEEE's Administrative Committee met on June 6, 1980 at IEEE Headquarters in New York City. Highlights of their discussion and decision are as follows:

1. IEEE's Educational Activities Board will be asked:
   a. to discontinue advertising the Workshop on Technical Communication and Report Writing, and
   b. to refer all inquiries about the Workshop to PC.

2. We have a limited number of "travelling instructors" on call, and, because of differences in administrative procedure, cannot change fees for the course and even realize a small profit if we make arrangements directly and not through EAB.

3. There are now more than 1500 PC-ers. This number represents a growth of 15% in the most recent reporting period—greater than that of any other IEEE entity. Rich Robinson, our Membership Chairman, has been sending letters to persons who have dropped out of the Society and also to persons who marked a PC code in their Technical Interest Profile.

4. Rudi Bock would like to have back copies of PC's Transactions, (6) 21/3 (March 1978) and (6) 22/2 (February 1979). If you have an extra copy of either issue, please send it to him at IBM Corporation, Dept. 384, Rm. 020, P.O. Box 1900, Boulder, CO, 80301.

5. PC-ers, especially AS60 members, are urged to support our publication effort by suggesting topics or authors for papers and news items, soliciting colleagues to submit material, or writing articles, news paragraphs, or general interest items themselves. Note the article by Ray Esham in this Newsletter; it is his second, and he promises more. Thank you; keep them coming.

6. In a recent mailing, 30 PC-ers who live in Norway, Sweden, Denmark, and England were asked to represent the Society at INDOCAM's Forum '80, the Second International Conference on Technical Communication, to be held in Lilleshammer, Norway, August 24-27.

As of June 20, three members have responded, but all, unfortunately, declined with regret. Bob Winton of London, recently retired from Business,