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Adore Your Thesaurus

By Arthur Plotnik

Who can resist? Open a good thesaurus such as an authentic *Roget's* and feel the urge to splurge—to slather, plunk down, shell out, and squander the bounty of words related to whatever notion you have in mind. I confess that the aptly named thesaurus (from the Greek for “treasure house”) unleashes my own prodigality, as if I'd bagged the goose that lays the golden synonyms.

Ah, but spender beware. Writers as diverse as Simon Winchester (*The Professor and the Madman*) and novelist Stephen King warn that words plucked from a thesaurus—especially as intended synonyms—are bogus and ill-spent. Don't open the damn thing in the first place, they advise. After all, other than in technical areas, true synonyms are rare. Most closely related words develop their own nuances as people use them. Therefore the dizzy application of a thesaurus's undefined offerings tends to be inappropriate, arcane, pretentious, or downright ludicrous, so they tell us.

Winchester, writing in *The Atlantic Monthly* (May 2001), tarred *Roget* for “our current state of linguistic and intellectual mediocrity.” In 18 pages of what thesaurus lovers would call a rant, he argued that *Roget's* seduces the masses with an easy solution to word choice; and yet, “...because the users are ill-versed, and because the book offers no help at all in discovering what anything means, the word chosen with each *presto!* is often wrong.”

“Each time such a wrong is perpetrated,” said the Oxford-educated Winchester, the language “becomes a...measure more decayed, disarranged, and unlovely. And that, I suggest, is why all *Rogets* [*sic*] should be shunned.” Winchester allowed that the thesaurus might be used to jog the memory or solve a crossword; “but one never, never relies on it to help with the making of good writing.”

So decreed Winchester. And King (*On Writing*) seconded the motion, which in effect says to toss the great treasury—with its 330 000 terms organized into 1075 categories (6th edition)—to the nearest junkyard dog.

But hold on just a minute.

Roget's Great Gift

If I were to throw any thesaurus to the dogs, it would be the type commonly bundled with word-processing programs—the low-rent, censored, lazy person's list of pedestrian synonyms. Talk about seductive. I pity anyone who might judge the splendor of true thesauruses by these click-and-fix aids for memo writers. They have nothing to do with the beneficent genius of a retired doctor named Peter Mark Roget.

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Rudy Joenk

This Issue

Items of note: The call for papers for IPCC 2005 in Limerick, Ireland, is on p. 23; the IEEE Engineering Management Society is coordinating a track for this conference. Returning secretary Muriel Zimmerman covers the highlights of the May AdCom meeting on p. 3.

I'm still interested in receiving proposals for single articles or short-lived columns for the remaining two issues of this *Newsletter*. See the information for authors farther along in this column.

Auld Lang Syne

You must have heard by now that November/December will be the last print issue of this *Newsletter*. I'm seeking both ideas and input to make it a memorable swan song issue. Do you have any "ancient" photos of PCS people or activities? Untold stories of a forgotten or unnoticed event? Extra-fond recollections of a long-ago society article worth

reprinting? The deadline is **31 August** but I'd appreciate hearing from you sooner.

If you want to be notified when each edition of the new electronic newsletter becomes available on the Web, go to <http://tinyurl.com/yqfsd> and include your e-mail address on your IEEE Web profile.

Deadlines are the 15th of the odd-number months.

AdCom

A new standards development study committee is being chaired by past-president Mark Haselkorn, who is PCS representative to the

U.S. Technical Advisory Group for ISO/IEC Joint Technical Committee 1/Subcommittee 7. IEEE is best known around the world for its standards and PCS can contribute to their development, especially in areas related to software and technical documentation, and in the process achieve visibility within and outside IEEE.

The U.S. Department of the Treasury's Office of Foreign Assets Con-

trol (OFAC) ruled on 2 April that the IEEE's publishing process is exempt from OFAC regulations and licensing requirements for scholarly papers submitted by authors from Cuba, Iran, Libya, and Sudan. *The Institute Online*, 9 April 2004.

The AdCom will meet again this year after IPCC 2004 in Minneapolis, Minnesota, 2-3 October. PCS members are always welcome at AdCom meetings.

Potpourri

Tiny URL The full URL for the doorway to IEEE Web profiles is 100 characters long. By using the free service at <http://tinyurl.com>, I reduced it to 24 characters: <http://tinyurl.com/yqfsd>. Try it, you'll like it.

Shakespeare's Coinage: Phrases attributed to Shakespeare and likely so:

- Foregone conclusion
- Full circle
- One fell swoop
- A sorry sight

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Highlights of the May AdCom Meeting

By Muriel Zimmerman

Thanks to Luke Maki, PCS vice president and Boeing engineer, the AdCom was able to meet at Boeing in Ridley Park, Pennsylvania, 21-22 May 2004. The theme of the meeting—at least for me, returning as PCS secretary after a five-year break—was rethinking the way that goals can be accomplished. We began with a tour of the Boeing plant where the V-22 Osprey is produced. The production process for the plane has been completely revised, based on consultations with experts who design manufacturing processes for the Japanese automobile industry. In several presentations from guests at the AdCom meeting, we also received ideas about altered ways in which we might accomplish our goals.

Three Guest Perspectives

Dov Jaron, IEEE Awards Board chair, provided an overview of major Institute honors, focusing on medals and technical field awards (<http://www.ieee.org/awards>). He urged PCS members to submit nominations for those awards as well as to volunteer

for service on the Awards Board. He invited us to submit proposals for new medals, and suggested that we invite IEEE awardees to make presentations at our conferences.

Peter Staecker, IEEE Technical Activities Board (TAB) treasurer, attended both days of the meeting and provided particularly helpful comments on a variety of matters as he listened to our discussions. In his presentation he reviewed the recent problematic financial history of IEEE and the associated high costs for PCS

of being part of IEEE. He told us about IEEE societies that are similar in size to PCS—Broadcast Technology, Reliability, Education, Social Implications of Technology, and Oceanic Engineering—and for each society he identified a “secret weapon” that provides income, often conference income, sometimes publications income. Peter Staecker supports the PCS goal of playing a major role in distance learning initiatives, providing continuing education for IEEE members.

Tom Wiener, chair of the IEEE Society Review Committee, urged the AdCom to begin work early on the required five-year IEEE review (2005 for PCS), thinking of the review as an opportunity to make long-range plans.



Left: *Beth Moeller; Peter Staecker, TAB treasurer; and Tom Wiener, president, IEEE Oceanic Engineering Society.*

Below: *Boeing's conference table was clear before we settled in.*



Below: *Boeing's South Philadelphia site was the location of our May AdCom meeting; PCS vice president Luke Maki made the arrangements.*



Conferences

IPCC 2004 is scheduled for 29 September–2 October at the Radisson Hotel Metrodome in Minneapolis, Minnesota. Bernadette Longo is conference chair, and reception sponsors include University of Minnesota Department of Rhetoric, University of Washington, Rensselaer Polytechnic Institute,

Minnesota State University at Mankato, and Mercer University. Apple Computers will supply equipment for the conference computer room, and Boeing has made a significant donation toward the publication of proceedings. The preliminary program as well as online conference registration is available on the conference Web site (<http://ieeepcs.org/> and click on IPCC 2004).



Above: Luke Maki arranged the AdCom dinner, but this isn't where he took us.

Right: Resting before hors d'oeuvres, PCS vice president Luke Maki hosted the AdCom dinner at this dinner theatre, where Bill Albing and Mark Haselkorn were unexpectedly given bit roles.

IPCC 2005 is scheduled for 10-13 July 2005 in Limerick, Ireland. Conference chair is Marj Davis, and the call for papers is posted on the conference Web site (<http://ieeepcs.org/limerick/>); also see p. 23 of this *Newsletter*. The theme of the conference is *Ceangail*, Gaelic for tying or connecting together, emphasizing the importance of technical communication in connecting engineers, educators, managers, and communicators in a global community.

IPCC 2006 is scheduled for 23-25 October at the Gideon Putnam Hotel and Conference Center, Saratoga Springs, New York; Beth Moeller is confer-

ence chair. IPCC 2007 is scheduled for 1-3 October in Seattle, Washington; Mark Haselkorn is conference chair.

Education

The PCS Web site contains extended information about goals and planned initiatives for training and continuing education (http://ieeepcs.org/resources_training.php). The WebEd initiative committee solicited proposals for a tutorial Web site to support the needs of authors for whom English is a second language. Five responses were submitted. Unfortunately, the budget submitted by the group whose proposal was selected was beyond the PCS limit. AdCom members discussed the possibility of videotaping workshops at IPCC 2004

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Below: "Uncle Senior" and "Slick Stan Man" Mark Haselkorn in *Bistro Romano's* production of *The Alto's* [sic]: Like the Sopranos, Only Lower. Bill Albing was featured as "Big Kitty."





Peter Reimold and Cheryl Reimold

How to Give Technical Presentations to Non-Technical Audiences

Part 3: Magic Questions

You have been told to give a presentation on your project to people from different areas of the company. What is the first question you ask yourself? If you are like most people, it is “What on earth am I going to tell them about it?”

That question is the reason most presentations go off the rails. Why? Well, it sends the presenter straight to the subject of the talk to look for the most interesting or important details of it. And here is the sad part: The features that most fascinate the technical expert (you) are almost guaranteed to send the non-technical listeners (your audience) into loud, painful yawns.

Say you’re presenting the results of work done to resolve customer complaints on your company’s top-selling product. Your analysis of specks contaminating a recent sample showed a few of them to be bits of ABC instead of the anticipated EFG. That is most surprising to you as it suggests the presence of certain unexpected minerals in the water used to prepare the product. The discovery is important to you in another way as it was made on the new spectroanalytical machine you had persuaded the company to buy. You are pretty sure the old machines would not have detected the tiny amounts of ABC.

How much do you think the sales representatives in your audience will

care about those momentous findings? Or the people from accounting? Gripping as they may be to you, the facts by themselves mean nothing to your listeners unless you can demonstrate how the facts affect their lives and work.

In fact, you can take it as given that *the interests of your non-technical audience will always be different from yours*. Those are the words that should guide as you plan your talk. They will lead you to a different question. Instead of “What am I going to tell them about this?” you will ask “What would *they* want to know about it?”

Ask the Magic Questions

Put the subject of your presentation aside for a moment and focus exclusively on your potential audience. Who are they? What do they do? What departments do they represent? Why are they coming to your talk?

The interests of your non-technical audience will always be different from yours.

Now select about five people from that audience. The number does not matter so much as the spectrum of interests they present. Try to get as broad a range as possible. One by one, imagine each of those people

standing in front of you asking the following questions:

1. What do you want to tell me?
2. Why does it matter to me?
3. How does it affect what I do?
4. How can it help me do my job better?
5. What do you want me to do with this information?

If you answer those questions rigorously, in complete sentences, two things will happen: First, you will probably find that your answers to questions 2 through 4 will cause you to modify your answer to question 1, which will become the main message of your presentation. The subsequent questions may force you to sharpen the focus of that main message or even to change it altogether if you cannot make it fit the interests of the listeners. Second, you will have the essence of a successful presentation in front of you.

Your answers to your five listeners’ questions will produce the core of an audience-driven presentation. Built on their interests and needs, it will naturally become a talk they will want to hear.

Their Language, Not Yours

“That’s all very well,” you may be thinking. “But what if *I* have something I deeply want to tell these people, whether or not they want to hear it?” Our answer is simple. If you can show them that your message touches their lives, interests, work, or needs—positively or negatively—they will listen. If you can’t, they won’t. Your challenge is to tell your story in their language.

Next time, we will see how to begin doing just that.

*Cheryl and Peter Reimold have been teaching communication skills to engineers, scientists, and businesspeople for 20 years. Their latest book, **The Short Road to Great***

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Adore Your Thesaurus

(continued from page 1)

Roget (1779-1869) had the sort of restless intellect that solved London's water filtration problem, invented the log scale for slide rules, and organ-

ized an immense collection of words into categories, according to the *ideas* they represent. The first such collection, *Roget's Thesaurus of English*

Words and Phrases (1852), launched a fleet of editions that he and his successors improved over the decades. It also prompted a host of (generally

Choices for your shelves

Roget's International Thesaurus. 5th ed., indexed. Robert L. Chapman, ed. New York: HarperCollins, c1992, 1141 pp. The HarperCollins versions are heir to the original *Roget's*. For the 5th edition, found in most libraries, Chapman overhauled the Victorian categories, building a postmodern framework (1073 categories) for 325 000 related terms. Many special lists, such as gods and goddesses, manias and phobias. The 6th edition (Barbara Ann Kipfer, ed. HarperCollins, 2001, 1280 pp.) is in stores and some libraries, with further updating, additional lists, and hundreds of quotations.

Bartlett's Roget's Thesaurus. 1st ed. Roger Donald, ed. Boston: Little, Brown, hardback 1996, 1488 pp.; paper 2003, 1456 pp. This newly classified and Americanized thesaurus—organized by concept, like *Roget's*—contains some 325 000 references in 848 main categories.

Quotations from Bartlett's vast archive exemplify selected words. The massive index is all-inclusive, covering all the entries, synonyms, lists, and quotes.

Roget's 21st Century Thesaurus in Dictionary Form. 2nd ed. Princeton Language Institute, ed. Barbara Ann Kipfer, head lexicographer. New York: Dell, paper 1999, 957 pp. A good choice as far as relatively portable, A-Z thesauruses go. It includes a conceptual index to 17 000 main entry terms and an impressive 450 000 synonyms (many repeated) attached to them.

Webster's New World Roget's A-Z Thesaurus. 4th ed. Charlton Laird. Michael Agnes, ed. New York: John Wiley, 1999, 894 pp. A synonym dictionary with frequent "synonym studies" and brief definitions to aid usage. The classification scheme presented up front is of limited use. Cross references, antonyms, special lists.

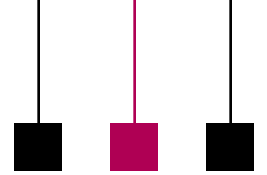
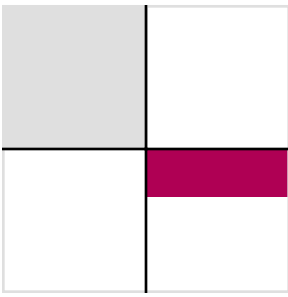
On the Internet

<http://www.visualthesaurus.com/index.jsp>. "Plumb Design Virtual Thesaurus." In this otherworldly thesaurus, related words float around a chosen term; when clicked on, they become the center of the shifting matrix. An ingenious presentation echoing—albeit slowly—a mental process of word association.

<http://www.m-w.com/home.htm>. Quick look-ups of synonyms, related words, and antonyms contained in *Merriam-Webster's New Collegiate Thesaurus*.

<http://www.wordsmyth.net>. "Wordsmyth Dictionary Thesaurus." Definitions, synonyms, and related words at one site for some 50 000 headwords. Neither the latest nor largest in vocabulary, but its advanced searches and quick links help target words.

http://humanities.uchicago.edu/orgs/ARTFL/forms_unrest/ROGET.html. One of several sites offering Project Gutenberg's digital transcription of *Roget's* (1911 edition, supplemented 1991). Searchable by headword or from the full text.



inferior) imitators bearing Roget and thesaurus labels, many of them mere dictionaries of synonyms.

The 150-year-long success of the categorized (classified) *Roget's* confirms its value to word-seekers. In contrast to an alphabetized dictionary of synonyms, where one seeks a *mot juste* by slogging door-to-door through rows of words, a genuine *Roget's* lays out a map, as it were, of thematic provinces, villages, and streets. Using the index one can shuttle from a single-word clue (say, *bright*) to a neighborhood (*light*) teeming with related terms; or, via the classified arrangement, wander thematic roads toward one's destination, choosing well-marked trails and exploring unknown and thrilling language along the way.

That, I think, is the magic of *Roget's* for writers: Traveling from theme to theme, directed by cross-references and other clues, one lives among word families, discovers Shangri-las of exotic terminology, beholds clashes of synonyms vs. antonyms, finds adventure even in misused words. Shun this wonderland of expression? A writer would have to be mad, unhinged, moonstruck to do so.

But so might that writer, before setting off, want to consider these tips from a weathered *Roget's* traveler:

- *Understand your quest and the limits of Roget's.* Use a thesaurus to find those good words you can't quite recall; discover more fitting or

more forceful words; avoid repetition of words; escape clichés and worn modifiers; help describe the so-called indescribable; refine your intended meanings (via related themes); and soak up the sheer plenitude of language. Do not look to a thesaurus to supply newly minted phrases, fresh and surprising uses of a word, or novel imagery. Nor can it tell you how felicitous (or ridiculous) a word would be in your context.

- *Look up the definition and usage of an unfamiliar word before employing it.* Roget-bashers can't imagine that anyone would take this obvious step. Use a good dictionary, not just the brief definitions offered in some collections. Look-ups can be tedious, but words looked up are words attained, whether they turn out to be *mots justes* or not.
- *Don't fish in the categories, swim in them.* The thesaurus organizes each category by parts of speech: nouns, adjectives, verbs, adverbs, etc. Don't cast in only one pool for the most creative solution. Dive into several listings, then do the same with the nearby antonyms, or opposite meanings. A fresh way of describing wild laughter? Look under *lamentation* with all its teary-eyed terms.
- *Don't grab all the words that fit.* "He knelt before me, obsequious, unctuous, groveling, fawning, toad-

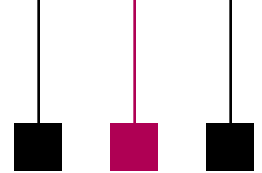
ying, truckling,...." So many juicy words crop up, you'll want them all. Make a choice based on nuance, texture, rhythm, and sound, keeping in mind your audience's frame of reference.

- *Search your brain as well.* Don't truckle to the genius of Roget. As you consider the thesaurus's suggestions, keep pumping your own synapses for related words and offbeat associations. One trick is to flip the thesaurus to a section that has nothing to do with your original category. The terms there may suggest loopy, figurative alternatives to a synonym. For example: I want

to convey *bright* light; I flip (randomly) to the *Violence* section and find terms like *savage*, *brutal*, *barbarous*, *uproarious*, *scorching*—one of which might be more forceful than, say, *lucent*, *luminous*, or *resplendent*.

- *Use new and older editions.* While new editions have added handy features and thousands of new terms, many of those terms are already outdated colloquialisms, such as *yucky*. I like the option of resuscitating quaint terms—even quaint slang—from the older editions.
- *Take chances.* Yo, this ain't Oxford, where word-bunglers fear towel whippings and social snubs. Stick your thumb into that thesaurus and pull out a plum. If now and then it proves a prune, you'll have learned

Use it right, and you'll love Roget's bounty.



something—and both you and English will survive.

Recently the novelist Alan Furst weighed in against Roget, saying that rather than succumb to “thesauritis,” he chose to repeat an apt modifier (“billowing”) throughout his book. Okay, so you can’t always find an alternative for a good word, even in the mighty seas of the thesaurus.

But don’t throw out the boat with the bilge water. For all writers there comes a time when, abandoned by their muse, adrift like the Ancient Mariner, they pray for the wallop of a favorable word, a word to billow their sails and push them along. For thousands of authors *Roget’s* has answered that prayer; and if it pushed them in new and unintended directions, so much the better for readers.

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The author is a contributing editor to The Writer and a former publishing executive who has written six books, including The Elements of Authorship and two Book-of-the-Month-Club selections: The Elements of Editing and The Elements of Expression.

From the Editor

(continued from page 2)

Phrases often attributed to Shakespeare but not likely so:

- Cold comfort
- Laughing stock
- It’s Greek to me
- The naked truth

Jennifer Vernon, *National Geographic.com*, 22 April 2004.

Ad on a British Web site for a professional copy writing service: “We’ll show the devastating impact that lively and totally memorable copy can have....” Peter Carnell in *World Wide Words*, 22 May 2004.

Pikes Peak was named for explorer Zebulon Pike, but in 1891 the U.S. Board on Geographic Names recommended an end to using possessives in place names, and in 1978 the Colorado legislature agreed, so no apostrophe. *The Denver Post*, 17 May 2004.

Accompanying a child’s report card was a letter from a Montana (U.S.) school that began: “Dear Parent’s:....” Scott Swanson in *World Wide Words*, 15 May 2004.

On a Melbourne, Australia, contest entry form: “Incomplete and incomprehensible entries will be illegible.” David Ashton in *World Wide Words*, 10 April 2004.

Winner of the *Atlantic Magazine* contest to describe “people who leave long rambling messages on answering machines and then rattle off their phone numbers at lightning speed in the last second”: *numblers* (short for number mumbler) by Gregory Pierce. *The Denver Post*, 9 May 2004.

Being somewhat critical of Lynne Truss’s endorsement of punctuation rules in *Eats, Shoots & Leaves*, John Rosenthal wrote in *The New York Times* (3 May 2004) “...the point of

punctuation [is] not to spin a web of arcane rules, but to remind us to write (and think) clearly. It’s obvious that force-feeding the rules of punctuation isn’t working.”

Among the rules Truss iterates in her “Zero Tolerance Approach to Punctuation” book is this: Apostrophes are used to indicate the plurals of letters (R’s) and the plurals of words (don’t’s) but are no longer needed in the plurals of abbreviations and dates (CDs, 1980s).

“This once-in-a-lifetime event sells out every time!” Heard on KMZT in Los Angeles. Greg Carter in *World Wide Words*, 1 May 2004.

You’ve just been dying to slip a *pilcrow* into your writing, haven’t you? Actually, it would be more appropriate to put it into something you’re editing. The pilcrow (¶) is the paragraph symbol and you can extract it

from the ANSI character set with Alt-0182 (on your numeric keypad). More than you ever wanted to know about character sets is available at <http://www.alanwood.net>. Suggested by Michael Brady, 8 April 2004.

Whereas search engines like Mamma.com find matches to key words and phrases, new anti-plagiarism software tools can cross-check whole documents with Internet material and even proprietary academic and media databases. They “fingerprint” a document and quickly recognize patterns found elsewhere. Reports indicate that initially about 30 percent of input from a school is less than original, but that proportion soon decreases when students catch on. May Wong (AP) via *The Denver Post*, 7 April 2004.

Computer Haiku

A file that big?
It might be very useful.
But now it is gone.

Aborted effort:
Close all that you have worked on.
You ask way too much.

There’s more at <http://www.funny2.com/haiku.htm>; Sony has replaced some of the Microsoft error messages on its Vaio computers with Japanese haiku.

Information for Authors

One thousand words makes a nice page-and-a-half article, though longer

and shorter articles may be appropriate. Write about what you know, things that you’re familiar with. If you live outside North America, consider writing about technical communication in your country. *You needn’t be a PCS member to contribute.*

If you use a wp program, **keep your formatting simple**; multiple fonts and sizes, customized paragraphing and line spacing, personalized styles, etc. have to be filtered out before being recoded in *Newsletter* style. Headers, footers, and tables lead the casualty list. Embed only enough formatting and highlighting (bold-face, italics, bullets) to show me your preferences.

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

Always give credit to the author or artist.

The *Newsletter* issues on our Web site (http://www.ieee pcs.org/activities_publications_newsletter.php) can be used as examples. Issues are posted about one month after distribution of the print version and now have active e-mail, Web, and table-of-contents links.

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

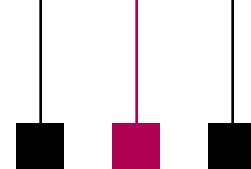
Deadlines

The 15th day of each odd-number month is the deadline for publication in the succeeding odd-number month; the deadline is 15 September for the November/December issue.

MLA Auto-Generator

MLA Auto-Generator (MLAGEN) by Patrick Do is a free Windows program that quickly formats the lists of works or references cited in your documents in accordance with the latest MLA (Modern Language Association), APA (American Psychological Association), Chicago, CPE (Certified Professional Editor; Canada), or Turabian style guidelines.

MLA Auto-Generator works with all modern versions of Windows; it is a free program offered under the GNU General Public License. You can find more information and download it from <http://mlagen.sourceforge.net/>.



WordStar Reviver

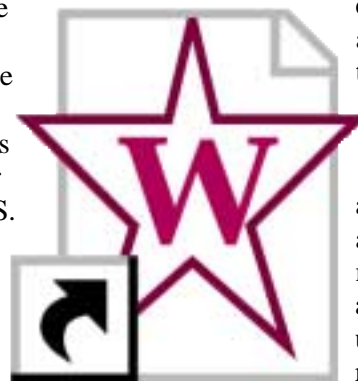
By Michael Brady

WordStar arguably is a godfather in the genealogy of modern word processing. Developed in the late 1970s, it was the first commercially successful word processor not tied to a hardware platform, as were the IBM, Wang, and other dedicated word processors of the time. In 1981 it was bundled with the Osborne CP/M-based portable computer and thereby became the first word processor widely available to the general public. In 1982 it was adapted to run under MS-DOS and by 1985 became the word processor most sold to individuals.

But then WordStar lost its market share to the more skillfully hawked WordPerfect. By 1990, when Microsoft Windows 3.0 was launched to become the *de facto* standard operating system for personal computers worldwide, WordStar was a shadow of its former self, its decline hastened by its late arrival in a Windows version and by the lack of user-friendly conversion utilities that would enable other word processors to read WordStar files. A cumbersome WordStar filter was included with earlier Microsoft Office file converter packs that now have been discontinued, and the Office 2003 file converter pack does not include a WordStar filter.

So, experienced wordsmiths may rue the demise of WordStar, not because it was any better than the word processors that replaced it, but

because newer word processors cannot read old WordStar files. That was the dilemma that historian Anne Bartlett faced in 1996. Her new computer ran Windows 95 and offered all the applications she needed in her writing. But it couldn't read the text files that she had written only a few years earlier using WordStar running under MS-DOS. Fortunately, an expert was at hand: her husband, Henry, a high-school teacher who had taught himself Basic and Pascal so he could write programs for computer simulation in teaching and for databases used in school administration. Could Henry write a program that would enable her new computer to read old WordStar files? He could.



Small utilities that solve small problems

He wrote a little command-line conversion utility that eventually became a WordStar Converter that he further improved on the basis of feedback from Anne and from other users. Then he bought Borland Delphi, taught himself Windows programming, and posted a Windows version of the WordStar Converter as freeware on his HABit Web site, along with other utilities that he had developed to solve the vexing small problems that computer users often face. The HABit utilities reflect Bartlett's programming equi-

alent of minimalism in art in that each of them supplies only what's needed and no more. For instance, the WordStar Converter comprises only 221 kB, operates from a simple dialogue box in Windows, and produces text files that can be read by any modern word processor. The lack of a final interface to a proprietary application is intentional, as adding one would make the utility larger and would constrain its use. Indeed, as Bartlett reasoned early when interacting with the users of his programs in schools, the needs of users always should come before the wishes of programmers.

Unsurprisingly, Anne and Henry Bartlett live in northern Tasmania, the southernmost state of and an island off the southeast coast of Australia, a country in which necessity has long driven do-it-yourself improvisation. As Henry remarks, "If I can, I tend to 'roll my own' rather than looking for someone else's solution."

There now are 16 HABit utilities, all freeware downloads from <http://www.hotkey.net.au/~hambar/habit/>. Aside from the WordStar Converter, my favorites are HABCal, an on-screen perpetual calendar; HABEdit, a Notepad replacement with extra features; and HABExam, a disk search utility. HABit also offers free software for schools and a Karaoke

Highlights of the AdCom Meeting

(continued from page 4)

in Minneapolis and repackaging content for online continuing education courses.

Standards

PCS has become a member of the United



Thomas Orr

States Technical Advisory Group (TAG) working on standards for systems and software doc-



Kirk St. Amant

umentation. Mark Haselkorn is PCS representative to TAG, with Bill Albing as the alternate. AdCom mem-



Bill Albing

bers are pleased to participate in this important initiative. Mark Haselkorn recommends the Standards section of the IEEE Computer Society Web site as a good place to learn about these issues (<http://www.computer.org/standards/>).

Editorial Advisory Committee

Four special issues of the *IEEE*

Transactions on Professional Communication are in process: Case Studies for Teaching Technical Communication (guest editors Julia Williams and Judy Strother),



Julia Williams

scheduled for December 2004; Expanding the Boundaries of E-Collaboration (guest editors Ned Kock and John Nosek), tentatively scheduled for March 2005; Research Reality Check: Changing Goals,



PCS president
Ed Clark

Changing Needs (guest editor Laurel Grove), tentatively scheduled for September 2005; and Communication Issues in User-Database Interaction

(guest editors Hock Chuan Chan and Keng Siau), with a tentative publication date of March 2006.



PCS treasurer
Steve Robinson

The most urgent upcoming business is the change from print to electronic format for the *PCS Newsletter*. For the final print *Newsletter*, editor Rudy Joenk is recruiting photos, untold stories, articles, and recollections of PCS in bygone days, with a **31 August** deadline.

Muriel Zimmerman is PCS secretary.

Tools of the Trade

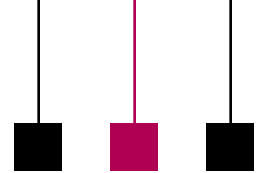
(continued from page 5)

Presentations (IEEE Press–Wiley, 2003), is available at ieeepress.org, in bookstores, and from Amazon.com. Their consulting firm, PERC Communications (+1 914 725 1024, perc.com@aol.com), offers businesses consulting and writing services, as well as customized in-house courses on writing, presentation skills, and on-the-job communication skills. Visit their Web site at <http://www.allaboutcommunication.com/>.

WordStar Reviver

(continued from page 10)

Manager developed in antipodean cooperation with a colleague in Sweden. And Henry Bartlett now is developing other utilities in response to user requests. He remains the scholar of Chaucer's *Canterbury Tales*, gladly learning and gladly teaching; the HABit Web site is refreshingly devoid of the gobbledygook so common on software sites; a visit to it is worthwhile even if you download nothing.



Jean-luc Doumont

Long, Long Laundry Lists

What could be simpler than a list, bulleted or otherwise? You merely gather some thoughts, then present them in sequence to your audience, one after the other. Yet this apparent simplicity, as often can be deceptive: Keeping things simple is a difficult task. As I write these lines, I am attending a large conference, and I am struck yet again by how lists are misused and abused by presenters and conference exhibitors alike.

Lists, especially displayed ones, suggest that items are comparable, that they belong to a common set. Ensuring that this be the case is a first step toward making effective lists. Phrasing these comparable items in a comparable way (so-called grammatical parallelism) is the next. Contrary to what software applications such as PowerPoint might suggest, bulleted lists hardly tighten loose thoughts; consistency of visual presentation does not guarantee consistency of content.

Still, even well constructed lists (those exhibiting parallelism of both content and form) may be hard to process, simply for being too long. What “too long” means depends partly on the list’s purpose; a long alphabetized list, such as a phone book or font menu, remains manageable. But as soon as the audience must grasp all items together, that is, be able to play with them in random order, not just in sequence, lists had better be kept short. How short? I recommend that they include no more than five items—a severe limit indeed.

No more than three levels, no more than five items at each level.

Five is a visual limit. When presented with five items or fewer, we know instantly how many there are, without counting. When presented with more than five, we must usually count to ascertain their number. Knowing how many items there are in a list is no objective in itself, of course; if it were, numbering items in a long list would suffice to make it readable. The visual limit of five is an indication of our capacity to process the items nonsequentially, an essential condition I would argue, to understand their relationship fully.

Many, many lists that would benefit from such a global processing include more (sometimes many more) than five items: lists of features or benefits for products, bulleted lists on slides and also long sequences of slides not otherwise structured, lists of links on the home page of Web sites, paragraphs composed of long sequences of short sentences, etc. Even the 22 rules of Strunk and White’s *Elements of Style*, useful as they are in isolation, are just so hard to remember as a structured whole.

Fortunately, our short-term memory compensates in depth for what it seems to lack in breadth. How can we effectively convey more than five items at a time? By grouping them into a hierarchical structure. Three groups of three items, for example, are considerably easier to process and remember than a single group of nine, as both the number of groups and the number of items per group are less than five. Through grouping, we have turned sequence into recursion.

Unsurprisingly, recursion is limited, too. When asked, the participants in my training programs readily agree that this limit is three. For example, they can easily visualize where Section 2.3.1 fits in a document’s structure, but find Section 2.3.1.4 much harder. In other words, we would do well to structure our documents in no more than three levels (such as chapters, sections, and subsections), with no more than five items at each level. Such a restricted approach still provides $5 \times 5 \times 5 = 125$ subsections, so it is unlikely to cramp our style.

A limit is not a target; sometimes even five items—or three levels—are too many. A table of contents that runs on many pages no longer provides the expected overview and might usefully be limited to two levels, such as chapters and sections, perhaps with a local table of contents (sections and subsections) at the beginning of each chapter. Similarly, we cannot expect attendees of an oral presentation to remember three levels of preview; two is a maximum, one (a few main points) being preferable.

For communicating information in an accessible and memorable way, I have not seen anything better yet than a well-designed tree, balancing depth (levels) and breadth (items)—and rooted in solid ground for content.

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

Teaching with Machine Translation

By Kirk St.Amant

Today's technical communicator is a part of a growing global forum. Participation within this forum is often restricted by language, however. In some cases individuals might not be able to review items written in another language. In other cases linguistic factors might affect how materials need to be redesigned, or localized, for other cultures. Technical communication students therefore need to understand how linguistic factors can affect professional success. To introduce students to those concepts, instructors can use exercises involving machine translation (MT).

When used appropriately, MT can be a valuable communication tool, but instructors need to familiarize students with best uses of such technologies. One resource for achieving this objective is the SYSTRAN Web site, <http://systran.soft.com>. First, however, students must understand that there is no substitute for personally learning another language; instructors should teach students about the limits of MT and how those limitations can cause miscommunication.

To explore MT limitations, instructors can use an exercise that examines differences between the literal and the intended meaning of expressions. For this exercise students access the SYSTRAN site, type the idiomatic expression *What's up?* into the *Text* box, select English-to-French

conversion, press the Enter key, and receive the translation *Qu'est vers le haut?* Students then copy this French expression into the *Text* box and convert it from French back into English. The result is *What is upward?*—a literal translation of the French expression, which was a direct translation of the original English idiom. Instructors can then explain how computer-based translation is limited and should not be used as a substitute for actual linguistic ability.

Such MT programs can, however, produce a general overview of ideas presented in another language. To appreciate this application, students should first access the online version of a newspaper written in another language. (One example is the Web site for the French newspaper *Le Monde*, <http://www.lemonde.fr>.) The instructor then asks students how many of them can understand the information presented on that site and how linguistic limitations affect their ability to understand the ideas and opinions of another culture.

After this discussion students return to the SYSTRAN site, type the URL for *Le Monde* into the *Web page* box, and translate the text of the site from French into English. This use of MT allows students to overcome some linguistic barriers when researching other cultural perspectives. Instructors, however, need to caution students that this approach provides

access only to overall ideas and cannot serve as a substitute for a human-translated text.

Next, students can engage in a comparative research exercise in which they first review the coverage a newspaper in their country gives to a particular event. Then they use SYSTRAN to examine how online newspapers from different nations cover the same event, and they write short papers comparing how cultural differences might affect international discussions of this occurrence. Through such an exercise, students learn how different cultural perceptions can affect cross-cultural discussions of an event.

This *Web page* option can also provide a foundation for understanding how translation factors affect localization. Translation deals with texts; localization deals with texts and other aspects that might need to be reconfigured to meet the expectations of another cultural group. Localizers might therefore work on items such as the visual design or the layout of materials (e.g., a Web page), and translation factors can affect these activities.

In the case of Web sites, images that contain text (e.g., buttons) can be problematic because localizers might need to recreate those items to display translated texts. In other cases problems can result from text expansion—a situation in which more words or longer words are needed to translate an idea from one language to another. The English word *Warn-*

(continued on page 15)

Machine translation provides access only to overall ideas and is not a substitute for a human-translated text.



Elizabeth Weise Moeller

Web Sites on a Shoestring Budget

It's been a while since I last covered creating information or e-commerce Web sites on a shoestring budget (September/October and November/December 2000). From much of the literature out there, however, it would appear that it is not possible to create a Web site for a small organization (one earning less than USD 50 million annually). Unfortunately, small business owners read those books and feel that a Web site is out of their reach when, in reality, a Web site is definitely within their reach.

As the owner of a Web site development company, I work with small businesses and nonprofit organizations on a daily basis. We often find that the benefits of a Web site to a small nonprofit organization may exceed, on a proportional basis, the benefits of a Web site to a multinational corporation. That is why I find it disheartening to review new books about Web site development, only to learn they suggest that creation costs start above USD 250 000. It is possible to create a basic informational Web site for less than USD 5000.

The process for creating a small site is very similar to the one used to create a large site, just on a much smaller scale. There are five basic phases to site development: planning, designing, programming, testing, and maintenance. This column covers methods small organizations can use to minimize their costs. For small sites, it is better to hire a consultant than to try to do it in-house. The end result is well worthwhile.

Planning

The first step in any Web site development process is planning. The organization needs to know what it wants to accomplish with the site.

Is it looking for:

- More foot traffic to their location?
- An informational resource for their target audience?
- A sales tool offering online sales?
- A value-add for vendors and suppliers?

Once the purpose and goals are defined, the organization can map out what it wants the site to look like. We find that using an organization-chart structure works best. This helps organize the pages on the site and lets the designer know how many links she or he needs to accommodate the home page design.

Design

After a site map is created, the organization needs to hold a design meeting with the developer to discuss likes and dislikes and the image the organization wants to portray online. At this stage the designers should also discuss color palettes and any branding requirements the organization may have.

Instead of directly creating a fully functional site based on the design, the designer can create two or three snapshot designs that the organization can show around the office. This significantly reduces costs by eliminating programming of a design the

organization may not like. Organizations often review these snapshots and ask for tweaks. Not until the final design is approved should a programmer become involved.

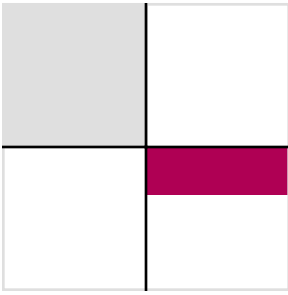
Programming

The programming stage is where it all comes together. In theory, the organization has been collecting content (images, text, etc.) for each page on the site map while the designer has been working on the design. This is another area where the organization realizes cost savings. More content provided by the organization means less content development for the developer. Organizations often have all the material they need for the Web site, they just need to pull it together and organize it.

A small site requires less programming simply because there are fewer pages to create. In addition, there are fewer variations from the design of one page to another. This allows the programmer to create a template on which the pages are based, saving time and keeping costs low.

Testing

When the programmer has completed the design, the organization is provided with a *beta* site to review. This is a chance for both the programmer and organization representatives to go through the entire site, make sure all links and images appear, verify that forms work and results are sent to the appropriate locations, and check that all dynamic content is correctly implemented.



After the *beta* site has been reviewed it “goes live” and is visible to everyone using the Web.

Maintenance

One thing often forgotten is that Web sites are dynamic, “living” documents. They need to be updated often and content should be refreshed whenever possible; this can be as simple as keeping a calendar up to date. Web consultants can provide dynamic

tools for the organization to keep the data current or they can suggest tools such as Macromedia Contribute to allow the organization to update the site on its own without “breaking” the site.

There is no reason that an organization need take in millions of (U.S.) dollars per year to have its own Web site. With the use of consultants who specialize in this area, a small business or nonprofit organization can

have a site professionally done within its budget.

Elizabeth Weise Moeller was president of PCS 2002-2003. She owns Interactive Media Consulting, LLC (+1 518 587 5107, beth@imediaconsult.com), a World Wide Web and Internet training firm in Saratoga Springs, New York, which provides Web site design and Internet training for businesses in the Northeast.

Teaching with Machine Translation

(continued from page 13)

ing (1 word, 7 letters), for example, becomes *Mise en garde* (3 words, 10 letters) when correctly translated into French. (Note: SYSTRAN will translate *Warning* as *Avertissement*.) If items such as buttons are designed to accommodate an English term exactly, those items might need to be completely redesigned to accommodate text expansion resulting from translation. To work effectively with localizers, students need to view materials in terms of both texts and visuals, and MT can facilitate such an understanding.

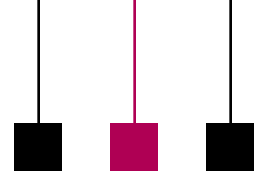
In one exercise students would use SYSTRAN’s *Web page* function to translate pages containing images that display text. In the resulting translations the text of the pages will be converted but not the text that was integrated into images. Students would next review what items were

translated and what items remained untouched. This prompts them to view materials in terms of text and images, and this perspective helps them realize how both factors affect cross-cultural communication. Instructors can then ask students to brainstorm methods for providing visual materials in an easy-to-localize format.

In a second exercise students review text-based images that were not translated and try to determine whether an item or the layout of the site needs to be reconfigured to accommodate text expansion. From this point students discuss how they might have initially designed the site to accommodate translation, text expansion, and localization. Through such an activity they learn why it is important to keep translation and localization in mind when creating original materials.

Used correctly, machine translation can be an important tool for technical communicators. MT-based exercises can provide students with a foundation for understanding and appreciating translation and localization processes. Such an understanding can help students succeed in their careers and become more informed participants in global forums.

The author is an assistant professor with the Institute of Technical and Scientific Communication at James Madison University in Harrisonburg, Virginia. He has a background in anthropology, international government, and technical communication, and his research interests include intercultural communication, online communication, and international e-commerce. He can be reached at stamankr@jmu.edu.



Ronald J. Nelson

The Magic of Math

Life is complex. For some of us, however, life is child's play when compared to mathematics. Imagine my joy, then, when I chanced on the following books that make this intimidating subject both comprehensible and engaging:

1. Ian Stewart, *Nature's Numbers: The Unreal Reality of Mathematics* (New York: Basic Books, 1995)
2. Mario Livio, *The Golden Ratio: The Story of Phi, the World's Most Astonishing Number* [1.61803] (New York: Broadway Books, 2002)
3. Margaret Visser, *The Geometry of Love: Space, Time, Mystery, and Meaning in an Ordinary Church* (New York: North Point Press, 2000)
4. Michael S. Schneider, *A Beginner's Guide to Constructing the Universe: The Mathematical Archetypes of Nature, Art, and Science* (New York: Harper Perennial, 1994)

Although I highly recommend them all for their ability to make the abstract concrete—a vitally important skill for professional communicators to develop, of course—I restrict my comments here to the last book listed.

Let us explore some of Schneider's techniques for elucidating the seemingly inscrutable. With a steady dedication to guiding the layperson through the maze of mathematics, Schneider presents his subject matter

with strategies that work, like (1) chapter titles that entice the reader in; (2) epigraphs at the start of each chapter and relevant aphorisms interspersed passim in sidebars that keep the reader focused; (3) ample margins and white space that encourage the jotting down of marginalia; (4) a plethora of interactive exercises that urge involvement at every turn; (5) an abundance of apt graphics to illustrate content; (6) an astonishing variety of subjects in the real and theoretical worlds that confirms the author's stature as a Renaissance person; (7) sentences that satisfy because of their refreshing lucidity and common sense; (8) fascinating, little-known facts, (9) a comfortable, unpretentious tone that puts the reader at ease, making her or him receptive to what Schneider offers; and (10) a profound insight into the nature of things, of virtually every aspect of life, that enlightens the reader. What more could a person expect from a written document?

Here are some of the delights of Schneider's masterful book. As always, *how* a person says something is every bit as important as *what* a person says.

His chapter titles, for example, are:

- 1 Monad Wholly One
- 2 Dyad It Takes Two to Tango
- 3 Triad Three-Part Harmony
- 4 Tetrad Mother Substance

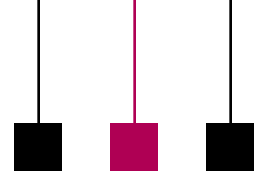
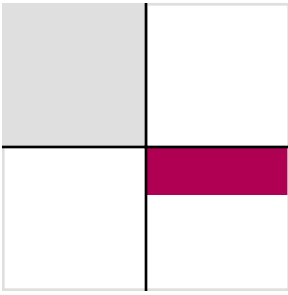
- 5 Pentad Regeneration
- 6 Hexad Structure-Function-Order
- 7 Heptad Enchanting Virgin
- 8 Octad Periodic Renewal
- 9 Ennead The Horizon
- 10 Decad Beyond Number

The very design of the table of contents at once reinforces the simplicity and suggests the complexity of the subject covered, inviting the reader to learn progressively. As Schneider notes, the Greek words provide more than numerical order: They “represent a process of unfolding cosmic qualities and principles” (p. xxix). To fail to open the doors to the chapters is to deprive oneself of ten enjoyable, illuminating experiences.

Authentic tone, word choice, and easily manageable sentences make for a wonderful journey.

Schneider's choice of epigraphs and aphorisms is unerring in its power to drive home whatever point is at hand. For example, Marilyn Ferguson's “Our biggest failure is our failure to see patterns” (p. xxvi); Shakespeare's “The wheel has come full circle” (p. 16); Aristotle's “The aim of art is to represent not the outward appearance of things, but their inward significance” (p. 75); and from the Talmud, “If you would understand the invisible, look carefully at the visible” (p. 78).

The book cannot be read passively. It irresistibly demands active involvement—often in the form of written reactions to Schneider's flawless

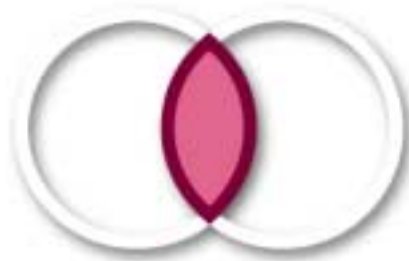


logic, insightful phrasing, connections to the world around and within us, and choice of examples—in the abundant white space provided.

Quoting Thomas Carlyle’s words (“The best effect of any book is that it excites the reader to self-activity,” p. xxix), Schneider encourages the reader to do geometric constructions on paper or in the sand so that he or she can “[recall] the ageless process of creation, replicating with our mind and hands the generative principles by which the universe is evolving” (p. xxx). As geometers, we need “to discover the inherent proportion, balance, and harmony that exist in any situation” (p. xxx). So Schneider gives tips on using the three tools of the geometer (compass, straightedge, pencil) and has the reader draw a circle, representing One. In doing so, the reader comes to participate in the first archetypal principle of the Monad—“equal expansion in all directions” (p. 10)—and is given examples in nature: ripples expanding in a pond, Harold Edgerton’s crater of milk, the growth rings in a tree stump. The second principle of the Monad—“the circle’s rotary motion” (p. 12)—is brought home with graphics and explanations of biological and inorganic processes, the rock cycle, the circulatory system, and the illusion of wheels (bicycle). Indeed, “Every process is characterized by cycles” (p. 15). The third principle involves “the area *within* the circumference” of a circle (p. 16), which is the maximum for any shape; the circle is therefore the most efficient

shape, illustrated by a ring road around a city, drawing the wagons into a circle, round tables, a bird’s nest, an igloo, and other circular shapes.

For Dyad, Schneider has the reader draw a *vesica piscis* (the bladder of the fish)—also known as the *mandorla* (*almond* in India)—thereby illustrating the basic structure of the



Vesica piscis

stoma (pairs of cells on the underside of a leaf that enable plants to exchange oxygen for carbon dioxide; the birth portal or *yonis* in Sanskrit; the secret sign between Christians in Roman times and often seen today (on its side, with tail taken from parts of the two circles) on the backs of automobiles; and the logos of TWA, MasterCard, and CBS Television.

The range of Schneider’s subjects and graphics to illustrate them is indeed impressive. Various icons and logos in a tripartite pattern call for the viewer to be alert as well as reminded of stability, wholeness, and strength (yield signs, Allied Van Lines, 100% Recyclable). Tetrads take the form of chessboards, pyramids, and square labyrinths. Leaves configure as pentagons, as do starfishes, apples, and

the human body. Hexagonal tiling patterns linked with images from nature and fantasy form the basis for many of the works of M. C. Escher. Heptads are intimately connected to music, light (rainbows), and seven crystal systems. Octads appear in chess, in the periodic table of the elements, in the phases of the moon, and in art.

Nine is the greatest single-digit number and so represents “the limit to which the generative principles of number reach.” As three trinities (3 × 3), nine is thrice sacred and is synonymous with “perfection, balance, and order” (p. 302). It is found in the Egyptian Ennead, the nine worlds of Odinic Mysteries, the nine-story Mayan temple, and the nine-level pagoda. Folk sayings also embody nine: “A cat has nine lives,” “Go the whole nine yards,” “dressed to the nines.” After nine, we are in the limitlessness of a new beginning, that is, 10. Ten is not a number, but “the epitome of number” (p. 324) and is the basis for the Kabbalah, “an intricate system of letters, numbers, and sounds describing the structure of the cosmos, our body, and our inner life” (p. 331).

Schneider sprinkles interesting facts here and there in the book, providing pleasant surprises. For example, $11111111 \times 11111111 = 12345678987654321$ (p. 3) and “Seven doesn’t form finite relationships with other numbers. When any number is divided by seven it always leaves an endlessly looping trail of

(continued on page 22)

Philadelphia

By Jeffrey Douglas

For 13 years the Professional Communication Society chapter of the IEEE Philadelphia Section has held an annual student paper contest. Students are invited to submit a paper covering the technical or societal aspects of engineering. The contest gives them an opportunity to exercise and attain recognition for their writing skills. Awards were presented at the section's student night, 13 April.

This year an excellent set of papers was received from students from four area schools: Drexel University, Rowan University, Swarthmore College, and Villanova University. *First prize* (USD 200) went to Michael Campolongo and Tim Osedach of Rowan University for "Fabrication of Nanoscale Electrodes for Molecular Characterization"; *2nd prize* (USD 150) to Megan Moran and Amy Vanderslice of Rowan University for "Design and Fabrication of Three-Dimensional Structures for In-vitro Bone Cell Study"; and *3rd prize* (USD 100) to Leonardo F. Urbano and Jacob P. Warren of Drexel University for "Power Consumption of Mobile Devices in a MANET."

The authors of the three winning papers chose to enter their papers in the IEEE Region 2 student paper contest also. The regional contest includes an oral presentation and is a part of the IEEE Region 2 Stu-

dent Activities Conference, held this year at Cleveland State University, Cleveland, Ohio, 23-25 April 2004. Megan Moran and Amy Vanderslice tied for *first place* in the regional contest and Leonardo Urbano and Jacob Warren took *third place*. The other *first-place* paper in the regional contest was "Optimization of Microwave/Optical Interaction in a Mode-Locked Microchip Laser" by Prashant Poddar of Lafayette College.

Honorable mention in the Philadelphia Section contest went to the following students:

From Rowan University: Aliasgar Gangardiwala for "Dynamically Weighted Majority Voting for

Incremental Learning," and Michael Muhlbaier and Apostolos Topalis for "Learn++.MT: A New Approach to Incremental Learning."

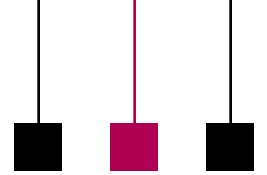
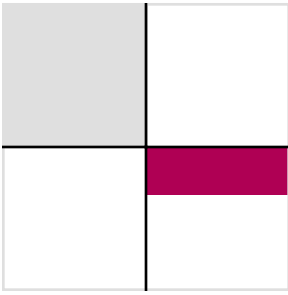
From Swarthmore College: Geoff Hollinger and Nick Ward for "Introducing Computers to Blackjack: Implementation of a Card Recognition System using Computer Vision Techniques."

From Villanova University: Charles McMullan for "Artificial Neural Networks," and Thong Nguyen for "Novice for Society."

Adapted by the author from the IEEE Philadelphia Section Almanack, May 2004.



Five authors attended and presented short summaries of their papers. Flanked by Jeffrey Douglas (PCS chapter chair and contest coordinator) on the left and John Sudano (IEEE Philadelphia Section chair) on the right are (left to right) Michael Muhlbaier, Michael Campolongo, Megan Moran, Amy Vanderslice, and Tim Osedach.



Business Economics in Finland Means Writing to Engineers

By Harri Kulmala

How would you imagine conducting research on business economics? Hands-on in the financial reports of top 500 companies, the analysis of stock markets, or raw material prices? Continual measurement on the variables that explain growth in the market? Yes but no. This all really is part of research in business economics, but in a small and highly technology-oriented country like Finland the questions asked of business researchers differ slightly from those set in large countries. In this note I illustrate the characteristics that prevail in business economics communication between university researchers and readers in Finland.

What makes the biggest difference between Finland and many Western countries is that Finnish decision makers are mainly people having an engineering background. The most typical education of top management of the top 100 Finnish companies is engineering and technology. Economics or law as the basic education of the top managers has been decreasing for the last 20 years. Hence, when engineers are in the position of posing research questions to universities or researchers, they pose primarily technically oriented questions. The *first* problem in reporting about business economics in Finland is that engineers define to a high degree what kinds of research questions are posed.

For example, management accounting and its applications and techniques

are widely developed in Finnish companies. Management accounting is interesting to managers because it shows which products are the more profitable ones to produce, what is the most profitable production method, how a certain piece of work could be done with the fewest finger marks. Technology and its use in the most profitable way seem to be the driving force in Finnish companies' interest toward business economics.

In the historical perspective, this is not a surprise. Finland has never been a country full of capital to be invested. Rather, we have had to compete in the market with few resources. It is natural that how to get the maximum out of the minimum—productivity—has been an essential research question. The *second* problem in reporting about business economics in Finland is that national characteristics have guided business economics to focus on management accounting and production economics.

Nevertheless, marketing research, market analysis, and financial accounting and reporting are left to a very few experts. This means that Finnish companies are mainly oriented to doing what can technically be done instead of what is expected to be demanded that they do. Hence, market orientation is low. The consequence of this has always been and seems still to be that the success of Finnish companies is connected to

the adoption of new technologies in the market. When discussing with possible non-Finnish investors or consumers, the engineering-oriented Finns often speak a “different language” than the other person.

There is only one global consumer product originating from Finland: a mobile phone. Other successful Finnish products, like paper-making machines, are capital goods. The difference between consumer

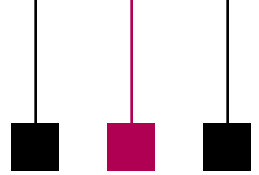
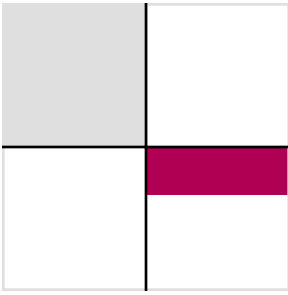
and capital goods is that capital goods are bought by engineers. Hence, a Finnish salesman can speak the same language as the capital goods buyers. In some Finnish companies, extra personnel were hired in the

'90s to write usable and readable instruction manuals. Traditionally, engineers have written manuals expecting that consumers understand the same as they do. The *third* problem in reporting about business economics in Finland is that the language of business research reporting may be too engineering-oriented because it is done for those who posed the research questions. It is a real challenge for us to write about business research so that it can be understood without technical skills in management accounting information systems, for example.

Since most of the business economics research is read by engineers, the written text seems to be shorter than in the U.S., for example, and full of

Most Finnish decision makers have an engineering background.

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Translation Trials Teach

“How now? A rat? Dead, for a ducat, dead!” Hamlet's cry upon hearing Polonius behind the arras* overflows with Shakespearian connotation and hence travels poorly into other languages. In Italian, Hamlet cries “A mouse!” There is reason for the shift of rodent species, as famed Italian author Umberto Eco entertainingly points out in *Mouse or Rat? Translation As Negotiation*, published in English last year.**

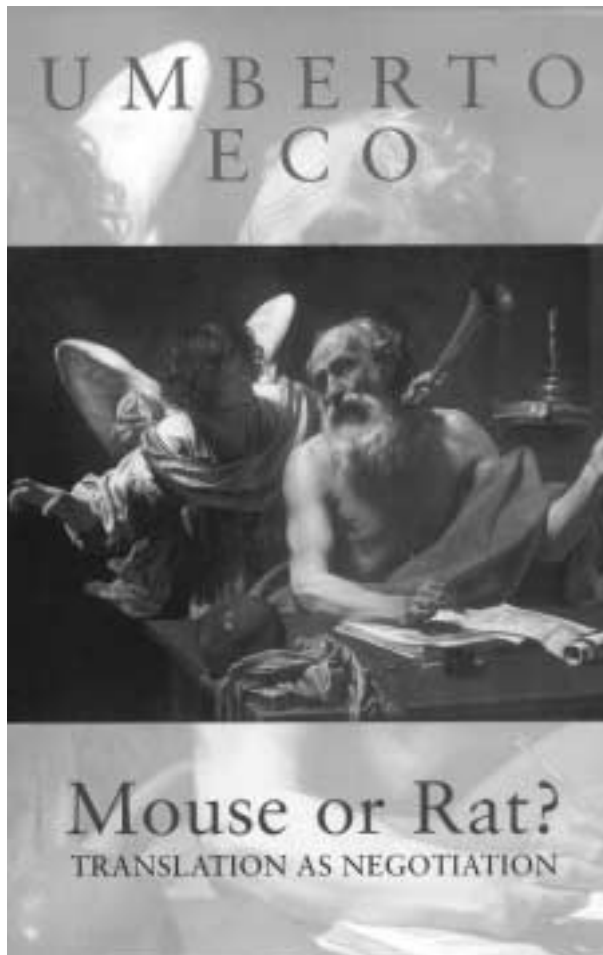
Though he focuses principally on the traps of translation between languages, he broadens the scope by observing that “translation is always a shift, not between two languages, but between two cultures or two encyclopedias. A translator must take into account rules that are not strictly linguistic but, broadly speaking, cultural.” Translation, he points out, also links differing media, as text and film; hence, the Walt Disney film version of *Pinocchio* is a translation of the text as well as the illustrations of Carlo Collodi's original.

* *Hamlet*, Act 3, Scene 4.

** *Mouse or Rat? Translation As Negotiation*, by Umberto Eco, London, Weidenfeld & Nicolson, 2003, GBP 12.99 hardcover, ISBN 0-297-83001-5.

In short, unless the writer also is the originator, translation always enters the process, be it between languages or between genre. This book is a must for any wordsmith who has stumbled in translating ideas to texts, and that means most of us.

— *Michael Brady*
Asker, Norway



Business Economics

(continued from page 19)

figures, diagrams, and equations. The *fourth* problem in reporting about business economics in Finland is that texts in business research reporting are in danger of being too simplified and too compact, and too many risk or sensitivity analyses might be left out.

Four problems have been mentioned in Finnish business economics writing. Is there anything good? Yes. Forward-looking research and scenarios are of high interest in the Finland of the 21st century. The average relevance and reliability of almost all Finnish business economics reports are high. In addition, the national competitiveness of Finland and the success of many Finnish companies in the global market are evaluated as world class. It seems that although business economics reporting is not yet highly versatile in Finland, it is effective and efficient.

The challenge in Finland is to find other than technological bases for national success. In this process, business economics research and reporting could act as support. This calls not only for change in the posing of research questions but also in the style of communication.

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New Words

Can you define these words?

<i>blog</i>	<i>skin (software)</i>
<i>captology</i>	<i>socksify</i>
<i>cooptation</i>	<i>soft skills</i>
<i>elytics</i>	<i>viewlet</i>
<i>midlet</i>	<i>Webify</i>
<i>portlet</i>	<i>Webinar</i>
<i>sitelet</i>	<i>Webucation</i>

Don't worry—the Professor doesn't have the definitions at her fingertips, either. You won't find many of those words in the Merriam-Webster online dictionary (<http://www.m-w.com/home.htm>), nor in the IBM Glossary of Computing Terms (<http://www.ibm.com/ibm/terminology/goc/gocmain.htm>). They are new words, and the Professor has started seeing them in her editing work within the last year or so.

As many of you remember from your college linguistics classes, languages are dynamic, generating new words to refer to new phenomena. New words may arise in the social domain (*adultolescent*), the scientific domain (*gluon*), the political domain (*spin doctor*), and of course in our own domain of information technology. New words are created through a few standard processes. You are probably familiar with those processes, even if you do not know the linguistic terms for them:

Blending

Merging two words, as in breakfast + lunch = brunch, and cooperation + competition = cooptation.

Transfer

Borrowing a word from another domain or from general usage and giving it a specialized meaning in the domain in question. The information technology (IT) world is filled with such terms: boot, compile, crash, grid, kernel, server, surf, virus, worm, and so on.

Commonization

Conversion of a proper noun or proprietary word to common usage. Google is now going through this process (“Why don't you google it and see what you get?”), just as Xerox did in an earlier generation.

Affixing

Adding a prefix or suffix. For example, the suffix -let has become popular in IT, giving us applet, servlet, and four other words in the Professor's list.

Clipping

Removing part of a word, as in blog from Web log.

What do these processes have to do with your heroic efforts to turn a 10 000-page legacy product library into an elegantly organized network of topic-based information? Simply that in our work as technical communicators we are bound to encounter new words in our source material and must decide whether to perpetuate their use. To help you make this decision, the Professor suggests that when you encounter a new word, you ask yourself two questions:

1. Does a word with the desired meaning already exist?

If it does, you can tell your content provider that you won't be using the new word in the information that you own. (If the content provider objects, you may want to involve your editor in the discussion.)

For example, the word *Webinar* is used to mean pretty much the same thing as the formerly new and now well-established word *Webcast*. Both refer to a short, Web-based technical or marketing session that is broadcast on the Internet and open to the public or to some specified audience. Therefore the Professor chooses not to perpetuate *Webinar*. (As an aside, the Professor is sure that you noticed that both *Webinar* and *Webcast* are blends of two existing words.)

Another example is *sitelet*, which is used to refer to a small Web site or to a subpart of a large site. But the existing term *Web site* has no specific size associated with it; a Web site can contain 10 pages or 10 000 pages. So the Professor is skeptical about the need for the term *sitelet*. Also, she is starting to see the term *zone* used to refer to a part of a large Web site, and she prefers it because it more clearly denotes a part of a larger entity.

But suppose you decide, perhaps in consultation with your editor, that the new word is needed. The second question to ask yourself is:

Should we perpetuate their use?

2. Will your users understand the meaning of the new word, either from its context or from the word itself?

If not, you of course need to supply a definition either inline in text, through a link, or through an easily accessible glossary entry. If you can't find a formal definition in the two sources named or on the Web, you can propose your own definition and submit it to whoever manages terminology for your company.

By the way, while the Professor reveres the traditional and is skeptical of new jargon, she is a fan of new words when they are genuinely needed to describe new entities or phenomena. For example, a few years ago the term *servlet* was a new word, but now it not only has a well-established meaning among Java and Web developers, it also has a formal, cross-industry specification that

spells out its technical characteristics. And the Professor is intrigued by the term *captology*, which refers to the study of how to coax users to stay on a Web site long enough for them to take some desired action, such as reading, downloading, or buying. Will college computer science departments someday offer courses in *captology*?

New words like the ones mentioned in this lesson are continually entering the IT world, where they either gain acceptance and become part of the IT vocabulary or else fade away into often well-deserved obscurity. Your treatment of those words when you encounter them can not only help our users understand and use our products, it can also help determine whether the words become part of the IT vocabulary of tomorrow.

Copyright 2003 by IBM Corporation. Used with permission. Professor

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

IPCC 2004 Highlights

(continued from page 24)

Workshops on Saturday morning (2 October) are focused on technical communicators:

- **An Introduction to Usability for Technical Communicators**, Brenda Huettner
- **Developing Strategies to Help You Prosper in Turbulent Times**, Katherine Brennan Murphy
- **Grammar**, Vickie Mikelonis
- **Helping Users to Use Help**, Stephanie Rosenbaum
- **Job Search Strategies**, Pat O'Donnell

Register online at <http://www.ieeepcs.org> (click on IPCC 2004); register before 31 August to save \$150 on your admission!

For the complete program and news and updates, visit us online. We look forward to seeing you at IPCC 2004, Communication Frontiers.

Masters of Style

(continued from page 17)

repeating decimals, 142857, mysteriously omitting 3, 6, and 9." Thus, $1/7 = 0.142857\dots$; $2/7 = 0.285714\dots$; $3/7 = 0.428571\dots$; etc. (p. 226).

Throughout the book, Schneider's authentic tone, word choice (challenging words are invariably accompanied by an explanatory parenthetical expression), and easily manage-

able sentences make for a wonderful journey through the world of numbers. It is an adventure well worth the time and energy expended.

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Call for Papers IPCC 2005 Making Connections

10-13 July 2005 Limerick, Ireland



Ceangail (KANG-guhl)—Gaelic, tying or connecting together. Communication is the tie that binds people around the world, crossing boundaries of knowledge, cultures, languages, and values. Technical communication connects engineers, educators, managers, and communicators in a global community. Come to IPCC 2005 in Limerick, Ireland, to explore these connections and share knowledge. <http://ieeeps.org/Limerick>

Proposed Program Threads and Topics

- **Localisation**
 - Technical writing
 - Technical translation
 - Vendor management
 - Writing for International English
 - Project management
 - Localisation teams
 - Software issues
- **Tools and Technology**
 - Translation tools
 - E-learning tools
 - New technologies
 - Authoring tools for the Web
 - International documentation
- **Engineering Management**
 - Managing virtual teams
 - Cross-cultural communication
 - Knowledge management
 - Compatibility issues
 - Managing technology
- **Cross-Cultural Communication**
 - Design and graphics
 - Web design
 - Training
 - Outsourcing issues
 - Documentation challenges
 - International English; ESL
 - Usability
- **Teaching and Training**
 - Teaching engineers
 - Preparing practitioners
 - Distance learning
 - Writing in new fields
 - International English training

Session Type

- Paper** (2-3 presentations in a 90-minute session)
- Panel discussion** (1-4 speakers, brief presentations with discussion in a 90-minute session)
- Conference workshop** (90 minutes)

Proposal Instructions

Please submit these items:

1. Description of topic (250 words)
2. Description of intended audience
3. Brief (100-word) biosketch of each author, including contact information (e-mail address and telephone number)
4. The suggested thread
5. The suggested session type
6. Statement of agreement to present: "If this proposal is accepted, I agree to register for IPCC 2005 and make the presentation described in this proposal."

Send your proposal to **Helen Grady, program chair**, at grady_h@mercer.edu no later than 15 October 2004. Electronic submissions are preferred. If you have questions, contact her at +1 478 301 2211.

For other conference questions, contact **general chair, Marj Davis**, at davis_mt@mercer.edu or call +1 478 301 2356.

Program Calendar

- | | |
|---------------|-------------------------------|
| 15 Oct. 2004 | Proposals due |
| 15 Nov. 2004 | Acceptance notifications sent |
| 15 Jan. 2005 | Draft of paper due |
| 15 Feb. 2005 | Feedback to authors |
| 15 March 2005 | Final papers due |

Program Highlights and Workshops

Find out how to navigate the ever-changing landscape of professional communication at IPCC 2004, Communication Frontiers. This three-day conference will feature some of the world's most respected and acclaimed experts whose work pushes the boundaries of science, engineering, communication, and other fields. You will also gain insight from other communication professionals, explore areas within your discipline that are profitable for research, and preview cutting-edge communication technologies.

Here are two of the exciting events that will take place at IPCC 2004:

- Luncheon keynote address (1 October) by William Horton, acclaimed author and communication specialist, entitled "O Brave New Media,"

which will describe trends in technical communication and explain why the 21st century will be markedly different from the previous five centuries. Horton will also give a workshop entitled *Visual Fluency*, which explores how to effectively communicate business and technical information visually.

- Apple Computers will host a technology room, which will allow you to preview upcoming communication technologies that may rapidly change the face of communication within the next few years.

Workshops on Friday afternoon (1 October) are focused on engineers:

- *Can Everyone "See" Your Web Site?* Beth Weise Moeller
- *Making the Most of Your Presentation*, Jean-luc Doumont
- *Visual Fluency*, William Horton
- *Writing Better Specifications*, Bette Frick
- *Writing for Publication*, Kim Sydow Campbell

NAVIGATING
THE EVOLVING
FRONTIERS OF
COMMUNICATION

29 SEPTEMBER –
2 OCTOBER, 2004



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