WRYTE for BYTE

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As an editor of BYTE, I gave a tour of the author-pitfall jungle to several interested people at a recent (if imaginary) small systems conference. Below is what transpired.

"OK, gentlemen, step right this way; we're heading into the jungle now. Be careful of the pitfall directly to your left. Any questions about the terrain so far?"

"Well, I have an idea for an article, but it's not very original . . . ," says one of the tourists, dropping into the pitfall.

"Oops! I warned him about that! Anyway, the rest of you can benefit from his mistake: that objection just doesn't stand. A new idea might seeem old hat to you, simply because you thought of it. Or, a variation on an old idea can certainly be material for print — what scientist dares claim absolute originality for his research?

Furthermore, even small system lore, presented in a tutorial style or approached from a new angle, can be both original and valuable. Look out to your right! More questions?"

"But I can't write anyway . . . ," cries another pitfall victim.

"I warned him! That's one of the deepest pitfalls around here. Well, the rest of you probably write much better than you think. It's necessary to have some humility here — your writing may sound bad to you, but no one expects you to win the Pulitzer Prize. Even if you don't write like a pro, think of BYTE as a device for getting good, if rough, ideas into print: submit an article when you've done your 'technical' best, and if we think it's worth it, we'll do our 'editorial' best to get it into publishable shape (leaving your style intact). This is worth emphasizing — most magazines accept only polished articles by professional writers, or else they force their writers into a stylistic straightjacket. But we feel that BYTE can do the most good, and be enjoyable to read, if we publish good ideas in as close to their original form as professionalism permits.

"Well, we've passed through the most obvious dangers, so please be more careful where you walk. Another question?"

"OK, I agree," says an ink-stained tourist, "my idea is good and I can write fairly well. But what good will it do . . ." Another one vanishes into an obvious pitfall.

"I thought you'd all see that one! Your published idea can be invaluable to anyone working on a similar problem. It's unlikely that your work is so unique that no one else could benefit from it! There are also many personal advantages. There's the satisfaction of serving others in your field, and, not least importantly, the money from published articles. Getting your name in print can both give a boost to your professional prestige, and can sharpen your writing ability, a useful tool in any job. Finally, writing about your idea forces you to understand it more completely; also, any feedback from us or from other readers of BYTE can certainly be helpful.

"This brings us nearly to the edge of the jungle. Since it's a lot safer here, you can look back and see where we've been."

"I see! But what can I write about . . .?"

"Darn, I thought I had spotted all the pitfalls! But you can learn from his mistake, and submit feature (medium to long) articles, short articles (tips and techniques, for example), or column contributions; at this point, you might even get a regular column started! As far as 'what to write about?', I'll quote Carl Helmers' ample answer to this question: 'I won't pretend to have a formula answer for that one . . .

" 'Some suggestions of general areas come to mind . . .

" '*Project articles* on new software, hardware or applications designs for systems. Projects which you
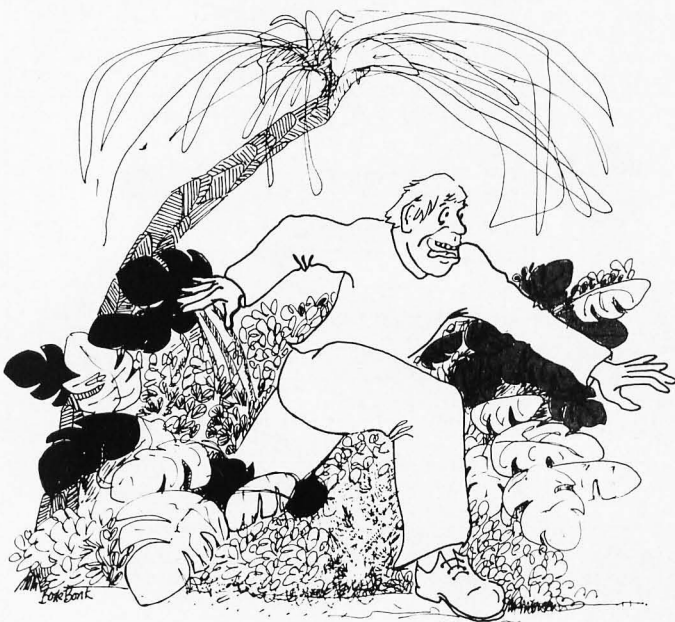
have completed or have in progress can be written up for the use of other subscribers. Don't let that "new" intimidate you, either — if it's new to you, and you're enthusiastic about it, then the project is worth setting down on paper for a try at publication.

" 'Special interests. Do your ideas tend to run along a particular train of thought? Are you a FORTRAN freak, a BASIC fundamentalist, an 8008 hacker, a PDP-8 fanatic, a space war addict, a lover of LIFE, or what have you? Submit an article or "n" to BYTE on your special interest, and it could become an important part of the lore of home brew computing — "bytology" for short.

" 'Surplus equipment. In Boston, there is a whole fraternity of junk men who often don't know a thing about the stuff they sell, but who sell it at pennies on the dollar. Often such stuff is usable in a computer system, with appropriate knowledge of *how* to use it. I once picked up a $3000 printer for $10 because it didn't look like a printer, and was left in a heap of junk to rot. Write up an article on how to convert particular items of surplus equipment to small systems use, and you will earn the heartfelt thanks of all the other byters who can use your idea. Often the cheapest course to a computer is an appropriately surplus "mainframe" saved from a scrap dealer or found at an auction. But, beware — misadventures can also happen, if you're not careful. Don't be ashamed of your mistakes, though — capitalize — on them by writing up your experience for BYTE.

" 'Games Byters Play. Fun-type applications make excellent articles. [See the beginning of a series of articles on the Game of LIFE, written by Carl, in this issue of BYTE.] There are other

fun programs to be written using a graphics display or other peripherals with an interactive potential. If you want some ideas, write us, and we'll suggest one or two or two hundred — or, if you have your own ideas, but are puzzled as to how to put them into practice, maybe we can help and the net result would be an article in BYTE.

" 'Practical applications. Do you also use your byter's system in your business? Many readers are businessmen — doctors, lawyers, architects, engineers, merchants — who justify their expenses by the practical, as well as the fun, applications of their systems. Write an article on business applications — billing, inventory, mailing lists, profit statements, etc. The businessmen in the audience will surely appreciate it. By saving their time and making their businesses more efficient, your article will help improve the commerce that makes all civilized amenities possible.

" 'Education. Do you have a flair for writing elementary tutorial stuff, with the knowledge to back it up? Write an article or series of articles on the basics. As has been pointed out to me in many letters, the tutorial aspects of design and

programming are not to be skimped on — especially if you want to teach your friends and associates so you can talk to them again! It always gives me a great satisfaction to see someone grasp a principle, discover a connection, and experience the delight of knowledge attained. With a published article, although you can't observe this at first hand, the feedback in correspondence should be evidence enough.

" 'Reviews. Have you built a computer kit? Write an article reviewing your experience with the particular kit. Give the manufacturer an objective treatment — don't blame him for your mistakes — but also be fair to readers by pointing out relative advantages and disadvantages of the product... Did you find an interesting book on computer related objects? Review it for your compatriots in the field. Such books include technical works as well as fiction and science fiction along computer lines. (The microcomputer itself is so "science fictiony" that many of my own friends don't really believe in 'em!)

" 'Human interest and creative writing. Byters appreciate the human aspects of computing. After all, computers are designed, built

The chances are that you know a lot about some aspect of computers — this is your opportunity to write and help other readers. The Pitfall: Waiting for others to write.

Fame (moderate) and Fortune (modest) await your contribution to BYTE.

and used by human beings. There is room for creative writing, humorous anecdotes, and speculations on the evolution of technology, commentary on computing history, etc. Who will be the first to submit an article on the history of Herman Hollerith?

" 'This is by no means an exhaustive list of all the possible topics for BYTE articles. If you don't see your own idea in this list of categories, we can always make a category to fit it into ... provided you take the step of getting it down on paper .... In addition to the standard articles, we will print (without charge, of course) information about club meetings, club organizers, and individuals willing to help others with their home brew systems, in order to foster the growth of the small scale systems idea.'

"Need I say more? And so ends our tour. Now that we're back in civilization, anyone still interested can follow me to the idea bar, where we'll drink a few hints about wryting for BYTE."

Some How To's of Writing a Feature Article

Here is not the place to give an "exposition on the compleat article and its fashioning." But, if you've decided to write a feature article, and if the thought of writing seems to go against every bone in your body, then the following might help. You should feel completely free to approach this task in any way you want; these ideas are only suggestions. But, they *have* worked for many people. Here we go ...

Outline It

Get your ideas down on paper. Write a few (2 to 5) sentences stating the central idea of your article; this will be your abstract. It should guide the outline — if you

ever feel lost, return to the abstract and find where to pick up. Next, the outline. Write down the main section headings, choosing them from the list below, or adding any that are appropriate.

Introduction: Flesh out your idea's skeleton, the abstract, relating the necessary motivation, background, assumptions, and source of ideas for the article. For example, you might tell how the idea came about, what previous BYTE articles your work is based on, and what kind of hardware and software systems it requires for operation.

Overall Design: Discuss and outline the general shape of the system being presented. This should be a "principles of operation" discussion at a relatively high level (but be practical about it), and will usually involve an "overview" of the system components, their actions and interactions. Visual aids such as block diagrams and flow charts are necessities here.

Details of Construction: Whether it be schematics, printed circuit layouts, or program listings, the details are necessary. If they are just too bulky, then this section should cover the system in more detail than the previous section, to whatever level is most helpful.

Construction and Debugging Techniques: The method of construction should be given here, if it is not obvious (and don't assume it is!). Any special techniques or touchy areas should be mentioned, as well as methods of system checkout (give, for example, diagnostic programs or hardware testing instructions).

Operation Instructions: If not given in the overall design section, complete operating instructions should be listed here. Present the system as it

appears to a user. Good examples of its use are the most helpful documentation.

Conclusion: Write the inevitable ending section (as short as possible), with mention of possible further developments and applications.

Using the guidelines for the outline headings above, jot down the main ideas under each heading. Take the result, shuffle the headings and ideas until you're satisfied with its structure (note cards with a single item per card are helpful here), and call this your outline. Make a permanent typewritten version of this outline, since it will be your guide in what follows.

Write It

To write an article is to enter a jungle of a different nature than the one we explored earlier. Without actually entering this writing pitfall jungle, I can forewarn you of the most dangerous pitfalls.

"Scribophobia:" This "fear of writing" usually strikes at the outset of the journey. The solution: working directly from the outline, get a first draft written, without stopping to worry about clumsy language or the niceties of grammar. Write without inhibitions, no matter how bad it sounds. The important thing is to get the rough draft written; once it's done, the rest is easy by comparison. Prepare diagrams as you go — they should be written and revised as an integral part of the text, not as a concession to formula.

Straying off the Path: The road to the end of the writing pitfall jungle is rather narrow, but you have a good map: your outline. Straying from it is asking for literary disaster. The written permanence of the outline (did you take my word for it earlier?) should discourage you from changing it too glibly.

Stuffiness: Avoid this danger at all costs; don't confuse *technical* excellence *with* highbrow phrases *and* grammatical ''stuffed shirt''-isms. Although this is a matter of style, and would normally be considered in later drafts, the first goes much easier if you write as though talking to someone about your idea. Don't avoid humorous touches if that's your style — they help to keep up reader interest. For example, cartoons that amuse and instruct are a welcome aid. Be intolerant with circumlocutions and useless phraseology. It is clear that phrases like "it is very clear that . . . " are redundant and only drag down the article with dead weight.

Jargon: Be careful of the ''in-crowd'' approach to writing, which uses jargon and cute phrases unknown to the outsider. On the other hand, don't feel obliged to define common terms or standard abbreviations (but see the later section on article glossaries).

Revise It

Many "How to Write" authors have recommended the fermentation method of revision. Put the freshly-typed (or written) rough draft away, and only come back to it after a few days. This temporal distance gives some objectivity during the next step of revision. This step will usually involve several "passes" over the text, by yourself and hopefully others. Revision involves looking for spelling, technical and grammatical accuracy, logical sequence of ideas, consistency of notation, and completeness of presentation. For example, during revision you may find several out-of-place colloquialisms, a few spelling errors, or an omitted section on a detail of construction. Try and put yourself in the position of a reader who wants to use your

idea: can he or she do so with what *you've* written? Are *there* any important but unstated assumptions? Any confusing diagrams or descriptions? Aim to be absolutely clear in the technical details of the article.

Shorter Articles

There's really no standard approach to writing shorter articles — the possible range of such articles is so great that it would be difficult to even hint at their "construction." Carl's section on article topics should be a source of some ideas, but my only further advice is this: if you have an idea that's not of feature-article length, then write it in any format you wish, send it in, and we'll try and fit it in somewhere.

Don't Gloss over the Glossary

Since BYTE is aimed at everyone in the small systems world, from junior high school experimenters to industry professionals, a good feature of any article is a glossary. Although it certainly isn't a strict necessity, a glossary should contain the definitions of any words, phrases, notions and abbreviations that might be unfamiliar to a good part of your intended audience. LIFE Line by Carl Helmers, in this issue, is a good example; since his article is (besides other things) a tutorial on system design, and is intended for a wide range of readers, Carl has included definitions of software and hardware terms that might be confusing or "jargon-ish" to the reader. Carl's glossary illustrates that definitions needn't be boring or dry — any sort of information about the terms being defined can be useful, including humorous definitions, anecdotes about derivations or other uses of a term, stories of your previous confusion about some phrase

(and how you cleared it up), and so on. If your article contains any kind of "side-light" information about possibly confusing words or concepts, then you should include these "tidbytes" as part of your glossary.

Send It In!

Some practicalities about submission of any kind of article: the text should be typewritten (double-spaced, with ample margins) — if you don't type, it's not expensive to have it done; the point of insertion for each diagram should be clearly marked; the illustrations should be clear

and oversized, if they are reasonably simple — our own technical staff can do the final drawings; include any special editorial or publishing instructions in a conspicuous place; if there's a glossary, it should be distinguished from the main body of text in some way. For feature articles, include the abstract and outline in the submission — these items are costless since they are a "spin-off" from a properly-written article. Unusually bulky detailed layouts and listings, although not included in the article, should be submitted, since they can be made available separately.

Probably the worst pitfall is putting off getting started on your article. Procrastination is the thief of fame and fortune, even in the modest amounts offered by BYTE.