

SESSION REPORT



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61	A060	Proposals for More Effective Online Doc.	50
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User Experience with Online HELP

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My experience with online documentation is in writing online help and news. I maintain a large database for the help system in CMS at Cornell University.

The problem I've found with writing online documentation isn't writing it per se; you write it the same way you write anything technical - as clearly and succinctly as you can. The problem is organizing your online information so that people who need it can find it. People don't want to have to learn to use help, and they don't want to hunt around - they want the information they're after to appear magically on their screens. They want the computer to understand their questions when explained in English, and the computers I've seen aren't very good at that yet.

I haven't been able to prepare help so that it works for the total beginner. When I first began writing help information, I spent a lot of time refining the language so that it would be intelligible to anybody. Once I thought I had done so, I found that beginners still couldn't use help as a learning device. They couldn't find the information they wanted. Once they found it, they were terrified by the syntax diagram, or they tried to copy the examples exactly as they appeared, without substituting a filename for fn as instructed. The beginners I talk with express a preference for printed documentation anyway, as they are not yet comfortable with the computer. Help begins to become helpful as soon as the reader has grasped some basic concepts, such as what a "command" is and what a "file" or "dataset" is. Help is, in fact, most useful for refreshing your memory about something you already understand.

The idea of different HELPS for people at different levels of expertise is appealing. There are two possible ways to do this:

- Keep a profile for each user. This could simply indicate "beginner," "intermediate" or "advanced." To be more complete, it would indicate "beginner at PL/I," "advanced at FORTRAN" - but this would be a nightmare to set up and maintain.
- Provide different commands to request different levels of HELP. You could, for instance, instruct beginners

to type "explain fortran," and more experienced users to enter "remind fortran." A problem with this method is that it requires people to learn more about HELP than they otherwise would. I suspect that many people would continue to use whichever command they first became familiar with, even when it was no longer the best choice for them or for their circumstances.

Your HELP processor can assist you in finding out how people are using it by keeping records of every request for help. At Cornell I look through histograms of such records every month. When I see the same error cropping up over and over, I know it isn't the users' fault - it's the HELP system which needs help. What can I do about it?

First, I try to provide a redundancy of paths to the same information. Cornell's HELP processor, written by Larry Chace, allows me to cross-reference a particular item by as many keywords as I like. So when I find a common error I can add a pointer to the correct HELP information, if I can identify what the user was trying to ask. Common errors include:

- Spelling out abbreviations, e.g. typing BREAKDOWN or BREAK DOWN for a command called BRKDOWN.
- Misspelling the names of commands that look like alphabet soup.
- Using the corresponding name for the command on another system, if your installation runs more than one system.

To be most effective, HELP information should be cross-indexed in every possible direction. Systems that have HELP almost always allow you to look up detailed information about a command if you know the command's name. But can you look up a command's name if you know what you want to do? If what you want to do requires a sequence of commands, can you look up the sequence? Is there a glossary of the terms used in explaining the commands?

The problem is keeping all this cross-indexed information up to date and in synch. Does this start to sound like a database application to you? It does to me.

If you can reduce to a minimum the amount the user needs to know in order to get help with a problem, you will have gone a long way toward producing more effective online documentation.

MORE EFFECTIVE ONLINE DOCUMENTATION

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This document was originally presented at SHARE 57 in Chicago under the Documentation Project. A lot has happened in the industry since that time and some additions have been made to the original paper to reflect those changes.

0.1 DOCUMETRICS:

'THE SCIENCE OF GOOD USER DOCUMENTATION'

Online and printed documentation have many aspects in common. The fundamentals of good documentation, including good human factors, apply regardless of the medium. However, simply putting machine-readable manuals on line that were intended for the printed page is a disservice to users and a misuse of resources. It is also the abdication of responsibility by both the authors of the software--if this was an intentional part of the system's design--and computer center personnel--if this is the way they attempt to solve problems of distribution. Documentation intended for the printed page must be restructured for the various online environments. Likewise, documentation written for terminal access is unsuited for the printer.

0.2 Types of Printed Documentation

Printed documentation is written to accomplish three basic purposes:

- Tutorial. You lead the reader in a front-to-back manner through the use and capabilities of the system. There is usually an implicit hierarchy to the entire manual and a hierarchy to each of the discussions by chapter and section. You devote time and space to introducing a subject and then treat it in detail.

- Reference. The organization is topical and explanations brief. The reader is expected to move about within the document as needed in order to pick out necessary details. Organization may be alphabetical by command/feature rather than strictly topical.
- Pocket Guide. You provide the reader with syntax including options, defaults, and limitations. You can assume a great deal about what the reader already understands. Organization is usually alphabetical.
- Newsletter. The information is timely. You keep users up-to-date on changes or problems with the system, including pending new releases.

Most printed documents try to be both tutorial and reference with varying success. With the growing popularity of pocket guides and online help facilities, printed manuals can and should lean more toward the role of tutorials and self-study guides.

0.3 Types of Online Documentation

Online documentation appears in four formats:

- Error. Perhaps the most overlooked source of online documentation is help messages. Whereas many error messages are cryptic and say only that an error has occurred, you should give the user complete information on what has happened and an equally complete set of guidelines for resolving the problem.
- Help. Tell the user what can be done at the point in the interaction where help is requested. Help is usually in the form of syntax, options, and defaults.
- Explanation. Explain a general topic in a brief but standalone manner. Downplay syntax in favor of an overall view of the appropriate context or component of the system.
- Tutorial. Lead the user through the system or some component of the system in what is probably a question and answer mode. Precede each interaction with a brief explanation of the question and possible answers. Include real examples wherever possible.
- News. Provide the ability for the system to display up-to-date information to users. You might also think about including user-to-user communications.

Most systems try to provide help, explanations, and tutorials in the same facility, which means they generally fail at one or more. Your top priority should be to develop online help facilities tailored to the context within which the user needs

or requests assistance. This usually means the more than one facility must be designed. At least two are required: error messages and some form of help-on-request, but don't try to make the latter explanatory and tutorial as well.

0.4 STYLE AND COMPOSITION

It may come as a surprise that there is very little we don't already know about writing technical documentation that doesn't come to us instinctively or from fields outside data processing, but only if we are willing to see beyond the specifics of our own problems and remove the shroud of mystery surrounding computers. The following discussion of style and composition is formed around The Elements of Style by William Strunk Jr. and E.B. White (3rd edition; MacMillan Publishing Co.; New York; 1979.)

While it seems that the types of printed documentation accomplish the same tasks as the types of online documentation, they are comparable in purpose only. The context of online documentation--the medium itself--is quite different and therefore the style of writing changes drastically. In designing and writing online documentation, emphasize brevity and specificity and explore a different organization because the terminal screen is not the place to read standard text.

0.5 Style of Writing

Online documentation is subject to the same style rules as printed documentation, with some alteration in priorities.

- Write in a natural way. Use words and phrases that come readily to mind. Use jargon only when necessary and then explain it. Also, use orthodox spelling; saving space at the expense of ready comprehension defeats the entire purpose.
- Use nouns and verbs. Adjectives and adverbs are usually unnecessary. Beginning an explanation with a command is sometimes most appropriate (e.g., ENTER ? FOR HELP.)
- Revise and rewrite. If you want to miss the mark, send something out without at least one other person's review. Others see problems you don't. If it is online documentation, review it on the screen, not on the printed page.
- Don't overstate. Readers can learn to distrust and ignore a barrage of emphatic warnings. Don't use and exclamation point or begin everything with "Note that;" they soon wear out and lose their impact.

- Don't be breezy. Humor works only once, if at all. Cute messages like "I AM CONFUSED" make the system seem stupid or cynical rather than friendly.

0.6 Composition rules

Online documentation is subject to the same composition rules as printed documentation, with slightly different emphasis on the first point:

- Use the active voice and talk to the reader. Stronger sentences are shorter. You can avoid he/she/user problems. Also, keep to the present tense, particularly in the online context since the action takes place immediately. Don't say "ABC WILL EXECUTE UPON COMMAND..."; say "ABC EXECUTES ON COMMAND..."
- Choose a design and stick to it. Familiarity aids understanding and immediate recognition. Use parallel constructions so the reader recognizes more readily the content and function.
- Use the positive form. Tell the user what is, not what isn't. Don't let the system respond with "H&*@ INCORRECT"; have it say "HOME, UP, DOWN ARE CORRECT RESPONSES." Don't use should, could, might, may, etc., except for real uncertainty. "REENTER" has a lot more power than "YOU MIGHT TRY REENTERING."
- Use definite, specific, and terse language. Emphasize words at the beginning of the sentence. "HOME, UP, DOWN ARE CORRECT RESPONSES" is better than "CORRECT RESPONSES ARE HOME, UP, DOWN".

0.7 FORM

The medium itself dictates the form of the message in some ways and enhances it in many ways. Since this paper is primarily about online documentation, the terminal medium governs the form.

Borrowing from the publishing profession, particularly the newspaper industry, online documentation is very much akin to the hard news story and printed manuals are akin to feature stories. We can learn a great deal from these analogies. For a good discussion of form as well as style and composition, see Editing in the Electronic Era by Martin L. Gibson (Iowa State University Press; Ames, Iowa; 1979.)

0.8 The Printed Page

When you write for the printed page, you are less restricted by format, size, shape, and length, and you should take advantage of this flexibility.

- Order. The order of presentation is less restricted since the eye is free to move anywhere on the page. You can follow the classic introduction/body/conclusion form within each chapter and section, and each discussion can usually take as much space as needed.
- Shape. You can interchange type sizes and fonts for more flexible formatting. However, follow the style rules of consistent design and don't get so fancy that you lose the reader. Type size can be used to emphasize hierarchy and fonts can emphasize words and differentiate explanatory text from examples, etc.
- Illustrations. You aren't limited to words to present an idea. You can use diagrams, illustrations, formulas, etc. This flexibility is still somewhat reduced for documentation produced by computer-driven typesetters, although great strides are being made to integrate graphics with text.

0.9 The Online Context

When you write for the terminal screen, you are restricted in size and form. However, there can be advantages to the fact that online documentation appears on a screen since some of your choices are dictated.

- Order. Since the point is to limit the reader's reading time, the terminal screen provides the clearest ordering of information according to importance. Most hard news stories are written in the inverted pyramid form, which means you should put critical information--the big end of the pyramid--at the top. Since the story tapers to smaller details, the story can be trimmed from the end. Likewise, the reader can stop reading or interrupt your message with minimal loss of information. Thus the analogy is made between the composer's scissors and the user's break or clear-screen key.
- Length. For online documentation to be serviceable, it must be short. Under no circumstances should you write a message or text more than the average screen length. Even with scrolling and paging, messages should be much shorter than the full screen. Just as many readers only scan the first part of newspaper articles that are continued to inside pages, users generally absorb only what is immediately before them on the screen. Anything longer belongs on the printed page.

- Shape. With more terminals equipped with blinking and highlighted text, and even full color text, the tendency will be for authors of software to blitz the user with a flashy light show. Just as type sizes and fonts can be overused, highlighting and blinking can be far more distracting than informative. Follow rules of consistency and particularly restraint.
- Illustrations. You can use illustrations in the online environment, but make them specific to the context and use the same restraint one shows with blinking and highlighting.

The use of color, highlighting, illustrations, tokens, etc., in the online environment as integral aids to user assistance has not been fully explored. The major difficulty is that not all terminals and environments support these features. Therefore, the online environment may look different depending on the terminal or host system the user has.

0.10 CONTENT

In most online systems, if you know the system as a user, you know a lot more than you might imagine about the situation the user is in and why a problem has occurred or why a question has been asked. This in fact is the real challenge to writing online documentation. The question you have to ask yourself is why the user made the error or why the user is asking for help (example, tutorial) at that point. If you can answer these questions, then you can write online documentation. Writing isn't the hard part, it's knowing what to write and which type of online documentation is proper.