

Creating Documentation that *Shows*

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If you need help doing something with your computer, where do you turn first? To documentation—or to a friend? At the University of Michigan, where I work, faculty, staff members, and students are likely to turn to their friends and co-workers, according to a 1996 university survey. They do consult documentation, but it isn't their first choice for help. Their attitude is likely typical.

What is it about asking a friend for help that differs from looking at documentation? What makes this practice easier and more inviting? The reason may be that friends typically *show* each other rather than *tell* each other how to do things. They point to the computer screen and say things like, "Pull down this menu. Now click here." They don't usually say things like, "Pull down the **File** menu and select **Print**." Or, if they do, they point first at the menu heading and then at what to select.

It's easier to understand what to do when someone shows you. When you read documentation, you have to figure out which instructions apply to you and then translate the instructions into actions. You have to figure out where the **File** menu is, for example, and then find **Print** in the list of options. You might even have to think for a moment about what a menu is and where the menus might be. You must look back and forth between the instructions and your computer, continually trying to connect the two without losing your place.

When someone shows you how to do something, they direct your attention and save you some of that mental processing. One way to improve documentation, then, is to show people how to do things—through text, layout, and illustrations.

In this article, I discuss some of my experiences working at the University of Michigan, including problems I've encountered and solutions that I've tried. You may find these details useful in your own efforts.

Anticipating User Needs

Sometimes friends help each other by paraphrasing written instructions. They might read the documentation and sort through the information to find what is needed to accomplish the task. A friend,

knowing what you want to do, can figure out what's really important in the written instructions and direct your attention to it.

Writing that *shows* anticipates what the reader wants to know and makes it easy to find. You can't anticipate everything every reader will want to know, but you can predict some of the things that many readers will want to know.

At the University of Michigan, people use a variety of platforms and software packages. The Information Technology Division provides central support for an essential core of information technology products and services. That support includes documentation and a help line that people can phone for answers to their questions.

My colleagues at the help line learn a lot about the questions people have regarding university computing services and what they find confusing. They are a valuable source of information on what people want and need to know, and they help me anticipate user needs. For example, their insights helped me improve two documents by doing the following:

- Putting crucial information up front.
- Adding an important detail.

Putting Crucial Information Up Front

The help desk staff noted that people who turn to our document on configuring and using Netscape Navigator with the university news server are often looking only for the news server address. So I revised the document, which is published on the Web, to include that address in boldface type in the first paragraph—no scrolling necessary to find it. Now people just looking for the news server address can see it at a glance and don't have to read the document at all. Detailed instructions are there for those who need them, but they no longer get in the way of those who don't. (You can see the document at www.itd.umich.edu/docs/s4264/.)

Adding an Important Detail

Our Campus Computing Sites consultants found that new students frequently asked how to print their class schedules and how to find the resulting printout amid the many other printouts coming off the shared Sites printers. The students

Figure 1. A User-Friendly Screen Shot

The screenshot shows a Netscape browser window titled "Netscape: Schedule for WINTER 1999". The address bar shows "https://www.access.umich.edu/cgi-bin/student/schedule". The page content includes a "Wolverine Access" logo, a "Schedule for WINTER 1999" header, and a table of class schedules. A callout box with a pointer to the table contains the text: "Note the print receipt number on your schedule. Look for this number to help you find your printout." The table has columns: Div No, Division, Course No, Hours, Sect No, Type, Res, Mod, Days, Time, and Place. The last row of the table has "396 PUB POL 406 3 001 SEM INS W 01:00-03:30pm 301 LORCH". Below the table, the text "Print receipt #33227" is circled. A "Logout" button is highlighted in purple. At the bottom, there is a link "Return to the Student Business main page" and a note: "If you have any questions about the information presented please contact us at schedule.studbus@umich.edu".

Div No	Division	Course No	Hours	Sect No	Type	Res	Mod	Days	Time	Place
396	PUB POL	540	3	001	LEC	INS		T TH	01:00-02:30pm	473 LORCH
396	PUB POL	556	3	001	LEC	INS		M W	08:30-10:00	419 W H
396	PUB POL	587	3	002	LEC	INS		M W	10:00-11:30	473 LORCH
396	PUB POL	638	1	001	SEM	INS		MTWTHFS	08:30-05:00pm	473 LORCH
396	PUB POL	406	3	001	SEM	INS		W	01:00-03:30pm	301 LORCH

needed to match a print receipt number on their computer screen with one on their printout, but many students didn't know the print receipt number existed.

When I revised our document on using this service, I included a screen shot with the print receipt number circled (Figure 1), along with instructions for printing the schedule. (Our online schedule system has since been changed, so that document has been retired.)

Getting to the Point

Although my colleagues often suggest adding useful information to documents, they seldom suggest deleting information. Yet nothing makes a person put a document aside and turn to a friend more quickly than a long, intimidating document. It is quicker to ask a friend for help than to struggle through all that text.

Web usability experts, journalists, and others recommend using the inverted pyramid style to get the most useful and important information right where the

reader needs it. Put your main point up front and leave the full explanation and detail for later.

I decided to try using the inverted pyramid strategy—and every other strategy I could find to *show* instead of *tell*—in a document I was writing on publishing Web pages. (You can see the document, *Publishing Web Pages Stored in IFS* (S4291), at www.itd.umich.edu/docs/s4291/.)

People at the University of Michigan can publish Web pages using a central file storage system called the Institutional File System (IFS). Some people on campus were using Microsoft *FrontPage 2000* and Netscape *Communicator* to create Web pages, but they didn't know how to use these products to publish the pages in the right place in the IFS.

My first thought was to begin with a brief explanation of how the IFS works with the Web server and why the pages go in the IFS (so people would understand the publishing location), then follow with a list of the steps in the publishing

process. I had to remind myself that people looking at documentation usually just want to get the job done. Few of them care—at that moment—why things work the way they do.

Using the inverted pyramid style, I first listed the publishing location used for each of the two software products. That way, people who were familiar with the software would be able to find the information they needed right away. They could stop reading the document before the end of the first page.

Directing Attention

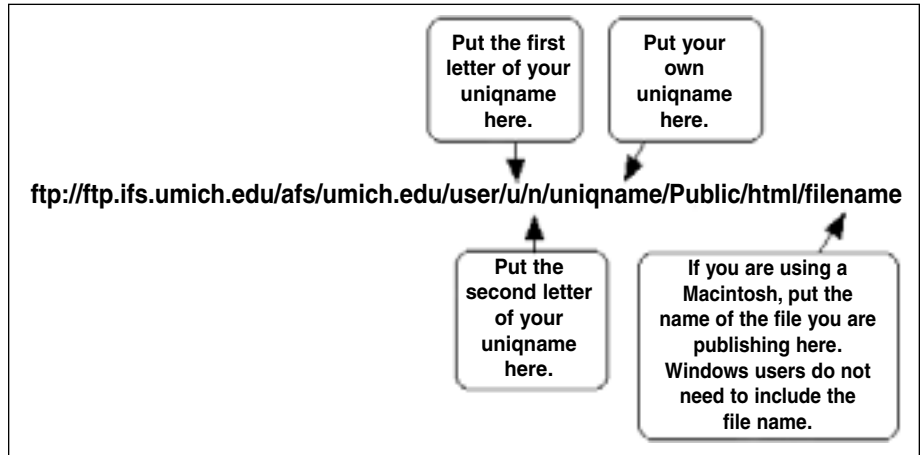
Next, I detailed the publishing process—*how* to do it, not *why*—using screen shots instead of text as much as possible. I wanted to *show* people the screen on which they would enter the publishing location, rather than tell them about it.

Showing the screen is not enough, though. That still leaves the user to figure out where the fields referred to in the text are on the screen. As Edward Tufte—a professor at Yale University and an expert in the visual display of information—recommends, you must emphasize the relevant detail.

Text balloons and arrows emphasize relevant details and direct the reader’s attention to them. When the instructions are in the screen shot, the user doesn’t have to read them separately and then figure out where to apply them.

Readers can more quickly understand the words “Type your password here,” with an arrow pointing to the appropri-

Figure 3. A Helpful Picture of Text



Pictures can be better than text—even when they are pictures of text.

ate field, than instructions that leave them to find out on their own where the password field is (Figure 2).

Readers can also find the picture again more quickly after looking away from the document than they can find their place in text instructions. That’s important, because readers will have to look away from the document frequently, referring alternately to the document and their work to follow the instructions.

Text as Illustration

Pictures can be better than text—even when they are pictures of text. For example, people at the University of Michigan using Netscape *Composer* to publish their Web pages must type in a long publishing location name that includes their user ID, called a “username.”

Our help desk consultants have found that some people, reading quickly through the documentation, mistakenly type the word “username” instead of substituting their own user ID when they see it in written instructions. This is complicated by the fact that people need to include the first and second letters of their usernames in a separate location.

I added a picture of the publishing location name, with instructions showing what to put where and with arrows pointing to the text (Figure 3).

Even with the added screen shots, readers had to put some of the instructions together for themselves. I was using one screen shot to show how to type the name of the publishing location and another to show where to type it. To make things easier for the reader, I combined them (Figure 4).

The result was that all the information the reader needed was together in one place. It was a lot of information—maybe too much at once—but I decided it was better to have all the information together.

Easy-to-Scan Layouts

I couldn’t use screen shots for everything in the document, so there was still a fair amount of text. People tend to refer

Figure 2. Directing the Reader’s Attention with Arrows

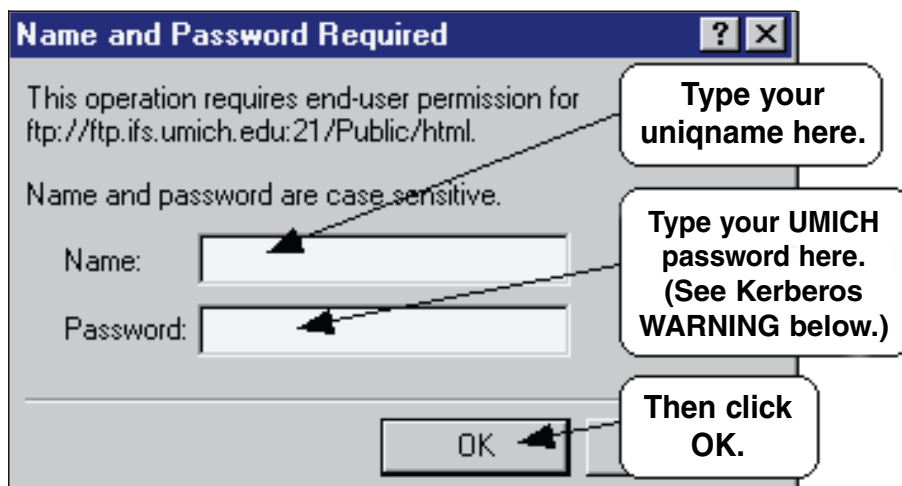
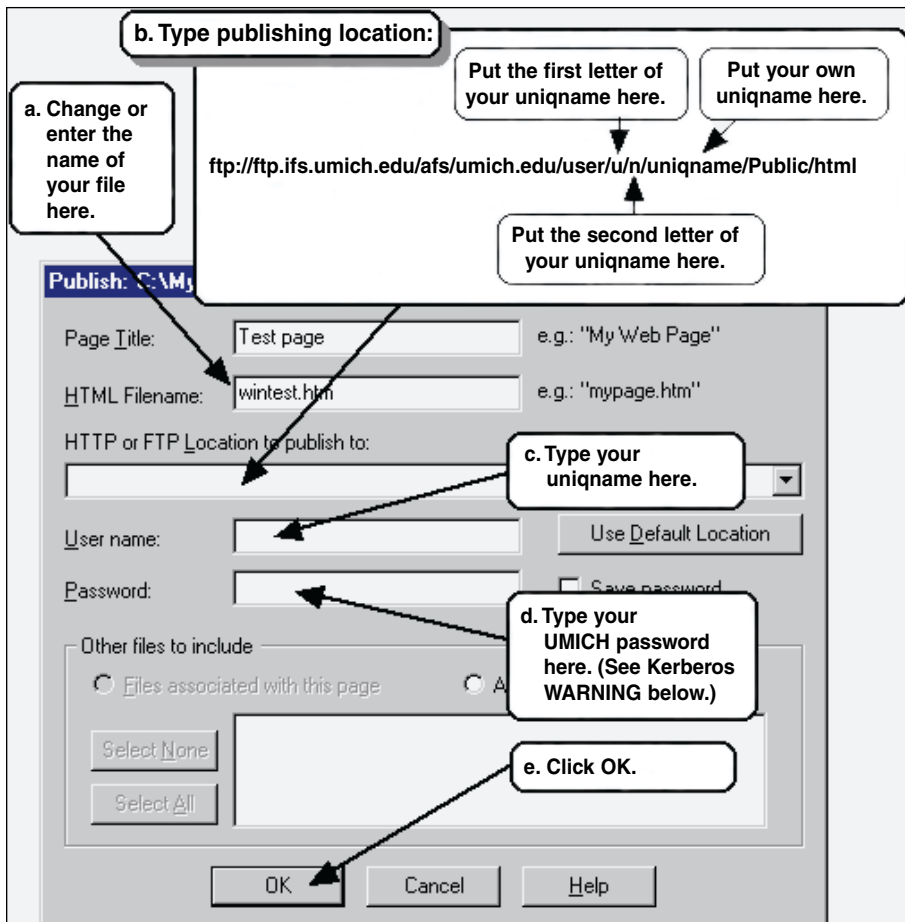


Figure 4. Consolidating Information



to documentation rather than reading it straight through. They read part of it, look at their computer screen, then look back—or click back and forth between the online document and their work. That means the layout of the text and graphics must allow people to find their place easily.

To make the document both easier to skim and to refer back to, I used standard layout techniques to make the text as picture-like as possible. (Web usability expert Jakob Nielsen lists techniques for making text “scannable” on his Web site at www.useit.com/alertbox/9710a.html. He reports that just changing a paragraph of text to a bulleted list can increase usability by 47 percent.)

Elements for making text scannable include the following:

- lists
- subheads
- tables
- short paragraphs

These techniques work because they

People tend to refer to documentation rather than reading it straight through.

add white space to your document. The little blocks of text then become graphic elements that are easy to find and to see. Look for every opportunity to use layout devices that break up text.

Even simple procedures like using boldface text instead of quotation marks (for example, the **Open Session** window instead of the “Open Session” window) make it easier for readers to find their place repeatedly. I always put URLs in boldface type, for example, because people have to look back and forth if they type them into their browser.

Making the Tradeoffs

Don’t overdo it. If everything is emphasized, nothing stands out. You can’t simply apply a list of techniques for showing rather than telling to a document without analyzing what to show and what to emphasize. And you have to decide when showing isn’t going to work and when you need to tell instead, considering the tradeoffs.

Here are a few tradeoffs to consider:

1. Putting Information Up Front Versus Avoiding Repetition

I used the inverted pyramid style and listed the publication location names up front in my document. I repeated them later in the list of steps for publishing pages. I normally avoid repetition in a document, but it was important to put critical information up front.

2. Illustrations Versus Document Length

The screen shots I used to show instead of tell took up more space than text descriptions would. Still, including the screen shots, even at the cost of a slightly longer document, was the right thing to do.

3. Organizational Mission Versus Keeping It Simple

I put a section at the end of the document explaining what the publishing location was. I used a diagram to show how the Web server interacts with the user’s file storage space and how the published pages are served to people browsing the Web. While an argument could be made for leaving that last section out for the sake of simplicity, I kept in mind that I work for an academic institution.

Knowing your audience and the context in which they will use your document will enable you to decide what tradeoffs are best for your readers. There is no substitute for the knowledge and experience we technical communicators bring to our work. **i**

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