

Technical Writing

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**II. THE FOURTEEN RULES OF TECHNICAL
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- 1. Make sure you understand the material yourself before you begin.**
- 2. Start with the bottom line.**
- 3. After the bottom line, tell the reader how you intend to explain.**
- 4. Frequently divide your material into sections.**
- 5. At the beginning or end of every section, summarize where you've been and tell the reader where you're heading.**
- 6. Number your points.**
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10. Be conversational and stay away from terms of art.
11. Don't talk down to your readers.
12. Make the people or entities you're discussing memorable.
13. Refer to common experiences.
14. Don't be wedded to the essay format.

I. THE OVERVIEW: YES, VIRGINIA, YOU CAN EVEN MAKE PATENT APPLICATIONS MORE READABLE BY STUDYING BOARD GAMES AND COOKBOOKS

Composing something that's complicated or technical is one of the hardest things writers have to do. Legal writers have to do it all the time, whether they're trying to explain a complex factual situation to a judge or a hard-to-follow legal position to a client. One reason that drafting something technical seems so difficult is that law students rarely receive any training in it, even though they must do it all the time. Another is that while good examples of technical writing exist—the *New England Journal of Medicine* and *Scientific American*, to name two—few lawyers are inclined to examine them. Even those who decide to study these periodicals have a problem. An article on, say, nuclear physics may be written so that the average reader can understand the material. Unless one knows a lot about nuclear physics, however, it's hard to figure out how the writer got from point A to B to C.

Most of us have encountered some other examples of technical writing, though. Consider the directions to board games such as Clue and Monopoly. If you think about it, the writers of these rules do a wonderful job of taking a fairly complex game and explaining it to nine- or ten-year-olds so well that they can almost immediately jump right into things. And there are rarely any fights over these rules (unless, of course, you happen to be playing with a bunch of lawyers). Another example of good everyday

technical writing can be found in cookbooks, which manage to present complicated recipes so that anyone can do the cooking.

Examining how games and cookbooks describe their "rules" can give lawyers a number of ideas about how to proceed with their own technical writing. Of course, not all of these will be applicable every time an attorney sits down to draft something complicated. Four or five, however, usually will come in handy. Here, then, are fourteen rules of technical writing that lawyers should remember.

II. THE FOURTEEN RULES OF TECHNICAL WRITING: MAKING THE INCOMPREHENSIBLE EASY TO UNDERSTAND

1. Make sure you understand the material yourself before you begin.

This is an obvious rule, but that doesn't mean that lawyers don't violate it all the time. The most embarrassing violations tend to come in oral argument. "Your Honor, the marginal cost analysis of this study shows—" the lawyer will begin.

"Counselor, what do you mean by 'marginal cost analysis'?" asks the judge.

There is a pause. "We mean the cost of the analysis, Your Honor."

"In laymen's terms, what do you mean by that phrase?" the judge asks again.

"If you analyze the margin and the cost, what you find. . . ." And later that same afternoon we know as little about the phrase as we did before.

That lawyer, like many others in similar situations, hadn't a clue as to what the phrase meant. She just copied it from some record or testimony without bothering to figure it out first. The rule here

is, can you put the concept in your own words? If you can't, you probably don't understand it. Ludwig Wittgenstein once said, "What can be said at all can be said clearly." Follow his thought, if not his example.

2. Start with the bottom line.

This is our rule from Chapter 1. It's important to repeat it here because writers of technical material often get so anxious about what they're going to write that they dive right into the material without giving the reader the core idea. Just as the instructions for board games tell players the object of the game first, you should tell readers your basic idea.

This is what the appellants' lawyers did in *Conservation Law Foundation v. General Services Administration*, 707 F.2d 626 (1st Cir. 1983), a complex environmental case. The brief begins (citations omitted):

This is a case about a governmental decision to sell surplus land. The government insists that in sales of property to the public, its only task is to get the highest prices it can for the property. The plaintiffs—citizens and environmental groups—maintain, however, that under the National Environmental Policy Act and the Federal Properties and Administrative Services Act, the government has an obligation to take environmental factors into account in its land sales decisions. At a minimum, the plaintiffs maintain that an Environmental Impact Statement analyzing the land sales must address specifically what will happen to the lands after sale.

3. After the bottom line, tell the reader how you intend to explain.

With complex material, readers need a written table of contents before they begin. To go back to our road trip analogy, if you're driving for the first time from San Francisco to Los Angeles, you don't want just to sit in the car and take orders. You like to look at a map first. The same principle applies here: Giving readers the game plan right from the start makes them feel in control. In their Supreme Court brief in the flag-burning case, *United States v. Eichman*, 496 U.S. 310 (1990), Charles Fried and Kathleen Sullivan did just this in the "Summary of Argument":

In this brief, we shall show (Point I) that what the Act forbids cannot be relegated to the fringes of the First Amendment assigned to low value speech . . .

Next, we shall show (Point II) that the prohibitions of the Act are wholly and inescapably content-based . . .

Finally, we draw the inescapable conclusion (Point III) that since no other purpose than the suppression of political activity is available to justify the Act . . .

At other times you may be presenting your information in an unusual way. That too should be pointed out to your readers at the outset, as Charles Alan Wright and others did in their famous brief for the appellants in *San Antonio Independent School District v. Rodriguez*, 411 U.S. 1 (1973):

Because of the unusual background of this case, and of the constitutional principles it announces, it does not lend itself readily to the usual form of appellate brief, in which Roman-numbered topic sentences proceed in syllogistic splendor to the inevitable conclusion.

4. Frequently divide your material into sections.

The more complex a document is, the more you need to break it into sections to give readers a chance to consolidate the information. A complex document should be broken up every four double-spaced pages or so, sometimes more often. Remember, when dividing your document, to label the sections as simply as possible—I, II, II(A), II(B), III.

The purpose of sectioning is to simplify the material for the reader, not to reflect its complexity. If Charles Dickens could write *Great Expectations* with simple chapter numbers, you can take your most complex material and do the same.

5. At the beginning or end of every section, summarize where you've been and tell the reader where you're heading.

Earlier I said that lawyers tend to be too repetitive, and that's true. However, in technical writing you want to repeat your principal ideas often. Readers of complex information frequently forget what they just read. When I was in law school, I would often read several pages of a case before I'd come upon a passage I recognized and realize that I had read the same case the night before. That happens to readers of technical material all the time.

These readers are also anxious readers; they need a lot of reassurance. Every few pages or so, remind them what you've been saying and what you'll say next. If you've never driven from New York to Philadelphia, it helps to see signs every few miles indicating that you're on the right road. They don't put I-95 signs up every mile or so just to give convicts something to do. Road designers understand that drivers need reassurance. So do your readers.

This technique is what the environmental lawyers adopted in *Conservation Law Foundation v. General Services Administration* to describe the series of complicated arguments the appellate court could use to justify the lower court's decision (footnotes omitted):

GSA's argument that it is exempt from NEPA in public land sales can be refuted in any of three ways. This Court can find:

(1) that the command in §484 (e) (2) (C) to consider the "public interest" when it sells land to the public does not preclude a consideration of environmental factors. The district court adopted this position;

(2) that the command in §484 (e) (2) (C) to consider factors other than price when it sells land to the public does not preclude a consideration of environmental factors; or

(3) that the command to accept fair market value in land sales to the public does not preclude a consideration of environmental factors.

6. Number your points.

Most game rules and cookbooks number their points, and with good reason: Giving the reader five specific points makes those points far more memorable than just reciting them, paragraph by paragraph. If you're making thirty-seven points, numbering isn't going to do much good, unless you're writing for devotees of our favorite philosopher, Wittgenstein, who wrote in numbered paragraphs. In moderation, however, the technique works.

7. Use the second person.

Think about giving directions to someone. You don't say, "One should make a left on Green Street. One then goes a half-mile." What you say instead is "Make a left on Green Street. Go five blocks to the gas station and make another right." You use the imperative—the second person. So does Monopoly: "Go directly to jail. Do not pass Go. Do not collect \$200."

There's a lesson in this. Ideas expressed in the second person tend to be much easier for readers to understand. This is one reason that law professors use hypotheticals so much: They want to

put you metaphorically in the shoes of the concept they're explaining, to make it easier to grasp.

As a corollary to this rule, don't be afraid to talk to your readers directly. If you were explaining a difficult concept to someone out loud, you would provide a context from time to time. "The reason I'm going to explain the legislative history of NEPA now is that without this background, you can't understand the next argument," you might say. For some reason, however, legal writers are afraid to provide context in their written prose. Don't make that mistake.

8. Graphics are important.

We live in a visual age; a picture can be worth the proverbial thousand words. Giving judges or clients a drawing can make it far easier for them to grasp the nuances. Graphs, timelines, and other visual representations help too.

In court, however, use graphics sparingly. As much as illustrations help, judges still tend to distrust them, given their almost religious belief in the written word. Moreover, make sure your graphics are accurate and look good. In this visual age, readers have high expectations for their illustrations.

9. Layout is important too.

I once heard about a study in which the participants were given two virtually identical sets of contracts to read. One set contained the usual contracts—single-spaced, poorly organized, without highlights. The second set of contracts was laid out far more attractively, with points highlighted in italics, the text double- and triple-spaced in parts, with wide margins.

By an overwhelming majority, the study participants said the contracts in the second set were better written. Of course they weren't; they were just better packaged. Yet the principle holds: In

a world where writers can easily use computers to present their material in appealing fashion, you should use these tools too. Of course, in litigation you must follow court procedures, and many of these rules are quite strict about layout. In other contexts, however, use your imagination.

10. Be conversational and stay away from terms of art.

The more complex your ideas are, the simpler and more conversational your prose should be. Paragraphs and sentences need to be short in technical writing. "See Spot run" is first-grade prose. "See Spot claim estoppel" sounds less so, and with good reason.

We must occasionally use terms of art, which should be defined. So be it. However, try to avoid using words that have to be defined. (Drafts of contracts and rules, where definitions are essential, are an exception to this edict.) Children can play Monopoly even if they don't understand what mortgages are. Remember that most readers don't read definitions, and even if they do, they seldom remember them.

A good example of a piece of technical writing striving to be conversational comes from this opinion written by the Federal Energy Regulatory Commission (FERC):

So, the logical questions with which to begin are: "How important is this subject to consumers? How much do they have at stake? Do they have *anything* at stake?"

The answers are clear.

For the contemporary American consumer, the most significant thing about the oil pipeline rate controversy is its utter insignificance. On an overall, industry-wide basis, the pipeline charge came to 61 cents a barrel in 1981. Since there are 42 gallons in a barrel, that is approximately 1.5 cents a gallon. No great cause for perturbation there.

11. Don't talk down to your readers.

Computer manuals tend to suffer from this malady. "This is easy!" they announce cheerfully, and an hour later, when you still can't figure out what the manual is talking about, you throw it at the computer. *Nothing is easy*. However, avoid the temptation to announce repeatedly how difficult a task is. That will only intimidate the reader. Just get the chore of explanation done and go home.

12. Make the people or entities you're discussing memorable.

With complex information, readers tend to organize the material around the characters. If those characters are indistinct, the reader is lost from paragraph one. Take any movie, short story, or novel; the characters tend to be introduced slowly. Otherwise, the writer has created a crowd scene.

Find a way to introduce your main actors and actresses slowly and memorably. This is a particular problem in legal writing, because so many corporate names sound alike, or at least forgettable, to the first-time reader. Keep in mind that using initials as a way to make corporate or agency names memorable doesn't work either. A good example comes from the decision by the U.S. Court of Appeals for the Second Circuit in *Ryder Energy Distribution Corp. v. Merrill Lynch Commodities Inc.*, 748 F.2d 774 (2d Cir. 1984):

The following facts cannot be found in the complaint: REDCO's previous dealings with TOI, REDCO's reasons for conducting an EFP, Merrill's inability to find REDCO an EFP partner, REDCO's introduction of TOI to Merrill, Hutton and NYME's lack of knowledge of TOI's default until June 11, and NYME's instigation of a rules compliance investigation after June 11.

I often receive complaints from corporate clients who say they get letters like this from lawyers: "Under the APA and NEPA, you must file an EIS, ASAP, with DOI, as well as a FOIA exemption." Understandably, they're completely baffled. Call these entities "agencies" or "Interior." Don't use initials, except in rare cases.

13. Refer to common experiences.

When I was a judicial law clerk, we had a case that required us to understand something about how oil wells work. The lawyer began by comparing these wells to bicycles, a device we all understood a lot better.

That was a good strategy. If you can get your readers feeling comfortable with a concept, it's far easier to move on to something more complicated. That's why many technical writers begin with a story or a striking example.

A wonderful example of this technique came in a brief filed by several San Francisco lawyers in the U.S. Court of Appeals for the Ninth Circuit in *Lewis Galoob Toys v. Nintendo*, 964 F.2d 965 (9th Cir. 1992). In the brief, the story that makes the technicalities come alive is laid out by the lawyers at Howard, Rice, Nemerovski, Canady, Robertson, and Falk in, of all things, the "questions presented" section:

It is Saturday, somewhere in Los Angeles. Lying on her bed, Debra, age 11, picks up the book she has checked out of the school library, *Charlotte's Web*. Although she has only read through page 61, this morning she finds herself wondering how it ends. Furtively she flips through the book and glances at the last two pages. Relieved to discover that Wilbur has not been made into bacon, she returns to page 61.

Later in the morning, Debra comes down the stairs to find an empty living room. Her older brothers, both in high school,

are at the beach. Debra slips a videocassette of her favorite movie, *Casablanca*, into the family VCR, and starts the tape. As Rick and Ilsa embrace, Debra frowns, and hits "fast forward" until more suitable action appears on the screen.

Suddenly, Debra notices the ordinarily occupied Nintendo game sitting temptingly on the coffee table in front of the television. Seizing on the opportunity, Debra turns off the movie and slips the game cartridge for "Super Mario Bros. 3" into the control deck; on reflection, she removes it, attaches the Game Genie video game enhancer, and reinserts the cartridge. She keys in the code "AEKPTZGE," which according to the instructions will give Mario nine "lives" instead of the usual three. That, Debra thinks to herself, will make up for her inexperience at the game her brothers have managed to monopolize. She also keys in the code that will start Mario in "world four" rather than at the beginning in world one; in previous attempts, Debra has never gotten past world three. Pushing the "Start" button, Debra begins to play "Super Mario Bros. 3." At the end of the game, she turns off the television set and the Nintendo control deck. The game cartridge is as it was before she played, unaltered in any respect. She has made no copy of the mysterious software in that cartridge, nor has she recorded in any form the game she played or the video displays that entertained her.

Has Debra infringed the copyright in *Casablanca*? The book author's copyright? And—as Nintendo asserts in this case and the district court seems to have found—has she infringed Nintendo's copyright in "Super Mario Bros. 3"? To answer that ultimate question, the Court will need to resolve the following questions:

1. Do the temporary alterations in game play which the Game Genie permits the owner of a Nintendo game to make, and their transitory reflection on the video display, meet the re-

quirement of Sections 101 and 106(2) of the Copyright Act that to create a derivative work it must be "fixed in a copy or phonorecord" (17 U.S.C. §101 [definition of "created"])?

14. Don't be wedded to the essay format.

In litigation writing, we write rarefied essays because that's what the rules require. In other contexts, such as letters and memos, however, legal writers need to be more creative about their prose models. When Heloise or Dear Abby wanted to discourse on a subject, they didn't write a lengthy essay; they answered questions, told stories, or made a list.

You should try similar approaches. If you have to explain a new tax regulation to a client, rather than writing a traditional memo, you might want to consider drafting a two- or three-sentence summary. Then tell your reader, "Here are five questions you're likely to have about these new regulations" and go on to answer them. Your material will probably be much easier to understand presented in this format.

No one wants to suggest that explaining the intricacies of trademark or environmental law is easy. But by keeping your writing simple and clear, you give the reader a much better chance of understanding your point of view as well as the technical aspects of the matter at hand.