The "Five Cs": A Guide to Successful Publication Using TeX

Colleen Brosnan
College Book Editorial-Production, Prentice Hall, Englewood Cliffs, New Jersey 97632
(201) 592-2312

Abstract

From the perspective of working at Prentice Hall College Division, my paper will cover the importance of the five C's: early Contact with your publisher, Consistency of macros, Compromises on issues such as design, Constraints of time and cost, and Communication, which is probably the most important.

I am manager of Technical Manuscripts in the College Book Editorial/Production Department at Prentice Hall and I would like to take this opportunity to share with you the experiences that we at Prentice Hall have had with authors who have submitted manuscripts prepared in TeX.

Until a few months ago, I was Production Manager of the Computer Science and Engineering team. My team handled the majority of TeX manuscripts that were published by the College Division, so I think I've seen it all — good and bad.

The Prentice Hall College Division has been working with authors who have been preparing their manuscripts in TeX for about five years and has published about 100 titles.

Over the years, we have encountered authors at all levels of expertise in TeX. Some have been extremely proficient in the use of TeX but have not been able to create acceptable page layout. For those, we send the author's files to a compositor who formats the files according to our page makeup specifications and inserts copyediting changes. Other authors are able to do it all — providing us with camera ready copy, even with separations for two-color books. And others provide us with files that are virtually unusable for a variety of reasons — we send those manuscripts to a compositor to be keyboarded from scratch.

We have learned a great deal during those years by working closely with our authors and compositors. The result of this collaboration is that we have developed what I like to call our "Five C's" — the keys to successful, painless (for both author and publisher) publication of TeX documents.

These "Five C's" are early *contact* with your publisher, *consistency* of your macros, *compromises* on issues such as design, *constraints* of time and cost, and, of utmost importance, *communication*.

Contact: Better Now Than Later

In an attempt to avoid unnecessary work, you should always contact your acquisitions editor before beginning any formatting of your manuscript. Your idea of a great design for your book may not be the publisher's — especially if the trim size you've selected is not appropriate for the market. The hours you've spent in creating your design will be wasted if your design won't be used. At Prentice Hall, we spend a great deal of time analyzing the marketplace and select designs that will be cost effective (use of tints, for example, may be quite costly to produce), geared to the audience (an introductory computer text may warrant liberal use of highlighted text or boxed material that would be distracting in a graduate-level programming book), and conform to the style of book that professors and department heads have told us works best for their courses.

If you feel you want to take a stab at preparing camera ready copy, ask your acquisitions editor to send you a set of book specifications for you to follow. Possibly the typesetting language that we use in writing our specifications will be as much Greek to you as your macros are to us. If so, call your production person and ask for a translation.

After you've formatted a sample chapter that contains the most representative elements in your book, send it to us in both hard copy and electronic form. If you're not sure whether we want your files on a cartridge, tape or floppy disk, call us and we'll advise you. Some compositors work only from floppy disks — others can use all types of media.

Your sample chapter will be reviewed by a production manager and art director for style and quality. Based on their recommendations, your acquisition editor will decide whether your formatting meets our standards for publication in that particular market.

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At times, even though the formatting is close to acceptable, we feel that more "fine-tuning" is needed. In those cases, we send the chapter back to you with instructions for improving the design or page layout. From the feedback we receive, we can get a sense of your expertise in this area. By the same token, you can decide, based on our comments and suggestions, whether the amount of work that will be expected is a task that you want to undertake.

If we decide that you will provide camera copy, do not format your entire book yet. Send us a double-spaced manuscript that we can use for copyediting. After you enter the copyedits, then you should do your final page makeup.

This initial contact is only the beginning of our effort at P-H to ensure that your TEX manuscript will be converted to a bound book with the least amount of effort in the shortest time possible.

If we — or you — decide that page makeup is best left to the "experts", we will send your electronic files to one of our compositors who specialize in TEX for a test to determine if the files can be used with a minimum of time and effort.

Our compositor will go through your macros and set selected elements, according to the specifications we have provided. You should give us guidelines on which elements or special characters you want to see set. These sample pages will help the compositor to identify any "glitches" in your macros that you will be asked to correct before submitting the entire manuscript. These sample typeset pages will be sent to you to review to make sure that elements have been typemarked correctly — for example, whether computer code has been set in nonproportional fonts and whether headings have been given the proper order of importance. You should proofread these samples carefully to verify that any special characters you have used have been translated properly.

Consistency

Consistent preparation of macros is one of the most critical issues determining whether your electronic files can be used by our compositors. "Keep It Simple" is the advice that all of our compositors give. Don't be so concerned about writing macros that "look good" at the expense of macros that "work well."

Even the most ambitious among you may find that keyboarding your entire manuscript in TEX is simply too time-consuming. If this turns out to be the case for you and you have to turn the job over to your assistant or several graduate students — or

if you have co-authors who are involved in your project — be sure to give them clear instructions on what macros you have used and what hard coding you have done so they can duplicate your work.

Whenever possible, use the default macros available in the version of TEX you choose. If you need to make some modifications — perhaps a special macro or two, or some time-saving string definitions — put these into a file of their own, using the \input command to read it in during processing. Be sure to put any customization files onto your tape or floppy so they are available. The file should always include a "read me" file explaining the macros and identifying any hard coding that has been added. Compositors spend an inordinate amount of programmer's time trying to unravel several different sets of macros for the same elements. Time spent by compositors trying to figure out what an author has done is a poor utilization of their resources.

A "clean" file should contain macros that can easily be converted to the macros that the compositor uses to implement the publisher's design. So, if there are elements of your manuscript that occur frequently, such as theorems, examples, or quotations, develop macros for them instead of putting space around them or putting them into other fonts. For example, you could use a simple macro that would add space before a theorem, set the heading in bold, print the theorem, and add space after it. If uncomplicated macros such as these are used consistently throughout your manuscript, our compositors will have a much easier job of implementing our design specifications and, in turn, will be able to produce finished pages faster.

Although the default font in TEX is Computer Modern, at Prentice Hall we prefer to use Times Roman in typesetting our books. Our compositors have redefined most of the standard TEX font calls to conform to our specifications. Therefore, keep your personal font definitions to a minimum to enable our compositors to translate to our fonts more quickly and easily. However, we do have one exception. We have continued to use Computer Modern for all math because of spacing problems in the conversion. Several of our compositors are working on this problem and we may be using Times Roman for that as well in the near future.

Remember that our compositors base their estimate of the work involved in your project on the files you submit in the beginning. After your sample chapter has been test-run and the compositor has given some feedback on the usability of your electronic manuscript, you will be asked to send in your entire manuscript in both hard copy

and electronic form. Be sure to save each chapter as a separate file; extra long chapters should be broken into two files.

Always send in two sets of the electronic files as we send your manuscript and files to two compositors for bid. We don't routinely duplicate tapes or disks. Failure to send in duplicates will only slow down production of your book as one compositor will have to review and return your files before the other compositor can do the same. We are aware that tapes are expensive, and we will try to return any unused tapes to you. However, the cost of tapes is minor compared to the cost of delaying the in-stock date of your book.

The complete manuscript, which should incorporate any suggestions made by the compositor who looked at your sample chapter, is then sent out for a thorough castoff and estimate by our two compositors. A decision regarding which compositor is awarded the job is made based on the time and amount of work they feel is needed for your project. So whatever you do, don't decide to change your macros — or switch versions of TeX, or even to a different word processing package — after you've sent in your original manuscript, unless you notify your production manager. Believe me, this has happened, and has caused an inordinate amount of anguish on the part of our compositor who had spent days trying to figure out why the files couldn't be loaded. Not only did this project cost more than anticipated, it was unnecessarily delayed because the author did not let us know about the switch.

Because macro usage is such an important issue in the decision to typeset from TeX files, Prentice Hall has worked with our compositors in developing standard macro packages, complete with documentation. These macro packages are designed to simplify the preparation and production of technical books and will cut time from the final production of your book. Be sure to ask your acquisitions editor about these standard macros before you start on your project to save time for both you and us. These macros will not produce final, single-spaced book pages — rather, they will enable you to print out, on whatever printer you have available, a double-spaced manuscript that we can use for copyediting. After you have reviewed our copyediting, the compositor will then substitute our design macros, implementing our fonts and specifications, to produce the final galleys and pages for your book. These compositors also offer technical support if you have questions about the macro packages.

An added benefit to using these packages is that at the end of the production process, if your electronic files have been used, you will receive not only a professionally produced book but also an electronic file that matches the book for future updates and revisions.

Compromises

Publishers have certain standards for producing books. Authors have certain standards for their material. Sometimes these two clash. For instance, you may want a lengthy computer statement to be contained on one page. Often this is simply physically not possible so the compositor will break the computer statement at a place required for good page makeup. To avoid inappropriate breaks, send us a list or samples of where computer statements can be broken for the compositor to follow. If you are concerned that the student may not understand that the computer statement continues onto the next page, ask us to insert a "jump" line at the bottom of the page that says "continued on next page." Or you may have equations that are too long to fit within our text column. The choices are to either set those in smaller type (which I don't recommend if you have subscripts that may become unreadable if set smaller) or to break the equation into two or more lines. Our style is to break equations before an operational sign, but you may have different ideas. If you let us know your preferences before we begin typesetting, we can implement them without additional cost or delays. If you see typeset pages and then want to make changes, the cost can be considerable.

You may be used to printing small quantities of your work in a corporate or academic environment where the style, for example, may be to begin a new page for every first-level heading. As book publishers who produce thousands of copies of your book at a time, we have to be concerned about the number of pages your book contains. We try not to have books that have a lot of wasted space — blank pages or pages with only couple of lines of text. Our concern is for the readability of the book — pages that do not follow a logical pattern are difficult for the reader to understand. Book publishing is a competitive business, and books that may be excellent in terms of content may not even be considered as possible adoptions because the format is totally different from what professors are accustomed to seeing. So be aware that the design compromises that we ask of you are not based on arbitrary decisions — rather, there are sound economic and marketing issues involved.

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Constraints

Authors and publishers share a common goal: turning a manuscript into a bound book and in a reader's hands as quickly as possible.

To accomplish this goal, some hard decisions may have to be made.

You may be a whiz at page makeup, can translate our design specifications perfectly, and have access to a high resolution printer. After discussions with your acquisitions and production editors, you have decided to provide your own camera ready copy. Then the project hits a snag. Copyediting changes may be heavier than you anticipated, page layout may become difficult or just plain tedious, or your printer may become unavailable. If any of these scenarios materialize, contact your editors immediately. We can help find reasonable solutions (for instance, we do have service bureaus that can provide high resolution output of your PostScript files). Keeping the project moving may call for a change of plans.

Also, as I discussed earlier, our compositors base their estimate of the cost of producing your book on the amount of work your manuscript needs to turn it into book form.

If you have used macros inconsistently, a programmer may need hours to work through the problems encountered. This is not only costly — a programmer's time can be quite expensive — but time consuming as well. The original schedule we had drawn up for producing your book will have to be scrapped because of these delays. We have asked our compositors to alert us whenever they encounter serious problems with a manuscript before proceeding. In many instances, it is better for the compositor to keyboard your manuscript from scratch. A programmer's hourly rate may be five times that of a keyboarder's. From a strictly economic viewpoint, it's not hard to see which path makes sense. Remember, too, that even if we did decide to have a programmer unravel your macros, a keyboarder is still needed to insert any copyediting changes.

In another scenario, the macros may have been flawlessly prepared and the compositor has no problems converting the macros to our design. But the amount of copyediting is substantial. In those cases, the compositor's keyboarder can actually rekey the entire manuscript more quickly than insert numerous changes to an already existing file.

Often I have heard from authors that the reason they want their files used is that they don't have time to proofread the typeset galleys and pages. You always have to proofread galleys and pages — even if

your files are used with no intervention. No matter how sophisticated the typesetting system is, the possibility for glitches exists. For instance, a special character could not convert properly or automatic numbering could get turned off inadvertently. We have excellent proofreaders who check your galleys and pages, but only you know exactly what should be in your book. Review of galleys, pages, and art takes time so let your acquisitions editor and production editor know in advance if you are going to be out of the country or are meeting other deadlines during the times scheduled for review. We will rearrange our schedules whenever possible to work around your other commitments.

Most authors will be unhappy that their TeX files are not used, but if they keep in mind our goal — getting the book on the bookshelf quickly and economically — the decision will be easier to understand.

Communication

In conclusion, I would like to stress the importance of communication. Authors have their desires and expectations. Publishers have their requirements and deadlines. Compositors have their constraints and needs. Unless all three can communicate, there is bound to be some misunderstanding.

From your initial contact with us, don't hesitate to ask questions. We may not know all the answers immediately — for instance, should you send your electronic files on tape? 1600 bpi? — but we will contact the compositor who will be working on your job and find out. If you have a technical question, we may ask our compositor to contact you to resolve it. Our production editors are not TeX experts — we leave that to the professionals — but we will guide you to the proper source. Questions about design issues, copyediting preferences, and scheduling problems should be directed to our production editors — that's their area of expertise.

In conclusion, I would like to review again our "Five C's" — *contact, consistency, compromise, constraints,* and *communication.* By keeping these in mind and working together to solve problems and concerns, authors and publishers will be able to learn from each other, share our knowledge, and smooth the production of your TeX document from manuscript to bound book.

Remember, at Prentice Hall, publishing your TeX manuscript in the most convenient, cost effective way is our ultimate goal.