Author's Guide to the Wiley

LaTeX Styles

Monograph Book

Amy Hendrickson
TeXnology Inc.

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Using the Wiley LaTeX Monograph Book Style

Welcome to the use of Wiley LaTeX macro set for producing a monograph book!

You will find that most of the commands found in standard LaTeX will work exactly the same when you use them with these style files. The few new commands specifically for will be explained here.

This macro set may be used with LaTeX2e, LaTeX2.09, and Scientific Word/Workplace 3.0.

Current Version

Please make sure that you have the current version of the macro files and the documentation. If you have not downloaded the macro set rather recently, you might want to download it at the time that you are ready to use it for your book.

The ftp site is: `ftp.wiley.com/public/sci_tech_med/authors/tex_macros/`

The WWW site is: `http://www.wiley.com/authors/guidelines/stmguides.htm` **As well as the macro files, you will also find a PDF version of the documentation, with a hypertext linked index and table of contents.**

Technical Support

If you find that you are having a problem *after you have read this documentation carefully*, help may be had by sending email to LVANHORN@wiley.com. If possible, please send a small file demonstrating the problem.

LaTeX2.09 and LaTeX2e

There are now two forms of LaTeX in use: the older LaTeX2.09, and the newer version, LaTeX2e.

The distinction between LaTeX2.09 and LaTeX2e is often confusing to authors. The tip-off is found in your .log file, however. If you are using LaTeX2e you will see a line like this, near the top: `LaTeX2e <1997/12/01> patch level 3` The Monograph Book style is designed to work with either LaTeX 2.09 or LaTeX2e.

LaTeX 2.09 Users

If you find you would like to use macros which you have written in your article, that is acceptable. Please remember to include your macro definitions at the top of your article file when you submit your article.

Author using LaTeX2.09 should use
`\documentstyle{w-book}` (`\documentstyle` expects a file name ending with .sty).

LaTeX2e Users

Author using LaTeX2e should use
`\documentclass{w-book}` (`\documentclass` expects a file name ending with .cls).

Additional Macro Files

If you have used any additional macro files, and are sending your files in to a production house, please remember to also include these files.

Files in the Monograph Book Macro Set

```
w-book.cls      The main macro file, LaTeX2e version
w-book.sty      The main macro file, LaTeX2.09 version
w-book.doc      Documentation
w-bktmpl.tex    Template File
w-bksamp.tex    Sample File
w-bksamp.bbl    Sample file bibliography file
w-bksamp.srt    Sample file index file

Optional files:
w-bookps.sty    PostScript font calls
m-times.sty     MathTimes font calls (use only if you have MathTimes fonts)

Scientific Word/Workplace 3.0:
  SWP-book.txt   Concise explanation of how to use w-book.cls with SWP

Shell files used by SWP
  w-book.shl
  w-bksamp.shl
  w-bkdoc.shl

SWP compatible versions of the w-bksamp.tex and w-book.doc files
  w-bksamp.swp
  w-bkdoc.swp
```

COMPUTER MODERN VS. POSTSCRIPT TEXT AND MATHTIMES FONTS

Authors can choose to use either Computer Modern or PostScript fonts, but for final production, the results will be much more handsome with PostScript. You may want to initially use w-book.cls without the PS font files, and then add the PS fonts when you are finishing the typesetting of your book.

To use Computer Modern fonts:

```
LaTeX2e: \documentclass{w-book}
LaTeX2.09: \documentstyle{w-book}
```

To use the PostScript and/or MathTimes font files:

When using LaTeX2e:

```
\documentclass{w-book}
\usepackage[mtbold]{m-times} %% for MathTimes math fonts
\usepackage{w-bookps} %% for PostScript text fonts
```

When using LaTeX2.09:

```
% For PostScript text, Computer Modern Math:
  \documentstyle[w-bookps]{w-book}
% (m-times only works with LaTeX2e)
```

Final Production

In final production your book should be printed using PostScript text fonts and, optionally, MathTimes fonts for math. You may use Computer Modern fonts for text and math, but your book will have a more professional appearance if you use PostScript fonts.

However, using MathTimes is optional, since not many authors have these fonts, and they are only available from a commercial vendor, Y & Y. (See www.YandY.com for more information.) If you do buy Math Time fonts, you are strongly advised to also get Math Time Plus package, so that you can use the mtbold option: `\usepackage[mtbold]{m-times}`**. If mtbold is *not* used, bold math will print as non-bold.**

You can access PostScript text fonts by using the `w-bookps.sty` **file, and MathTimes fonts by using** `m-times.sty`**. Use them in the order seen below:**

```
LaTeX2e
    \documentclass{w-book}
    \usepackage[mtbold]{m-times}
    \usepackage{w-bookps}

LaTeX2.09
    \documentstyle[w-bookps]{w-book} %(m-times works only with LaTeX2e)
```

Customizing the Font Files

Most authors have at least some PostScript fonts on their system. The problem is that there are differing conventions for naming these fonts depending on your implementation of TEX. This means that we cannot provide one uniform PS font file for all authors.

To get around this problem, both the file `w-bookps.sty` and `m-times.sty` are customizable. Please look at the top of the file, where you will see the lines you need to modify to have the PS font calls use the PS names found on your system. As soon as you have discovered what PS names are on your system you can make the appropriate substitutions. You can find font names in the TeXtures menu, or, on other systems, by looking into the directory where the .tfm fonts are found and making your best guess as to what Times Roman, for example, is called. In each case, the changes should be confined to the top part of the file. The lower part of the file will use the definitions you've written, and the rest of the style will be automatically customised to match the names of the fonts found on your system.

```
%%  Change these definitions, if necessary ====>
%% Times-Roman
%---------------------
% (Berry font names)
\def\timesroman{ptmr}
\def\timesbold{ptmb}
\def\timesitalic{ptmri}
\def\timesbolditalic{ptmbi}

% (Y & Y font names)
%\def\timesroman{tir}
%\def\timesbold{tib}
%\def\timesitalic{tii}etc...
%% <==== End of changes needed. Do not make changes below this point.
%% !!!!!!!!!
```

DRAFT VERSION

You may use the command `\draft` immediately after the `\documentstyle` command. This will provide 'double spacing' between lines for easy editing of your copy.

The draft command will also cause a line to appear at the bottom of each page containing the words 'Draft' with the current date and time that the file was LaTeXed.

THE SAMPLE FILE

`w-bksamp.tex` is a sample file which shows examples of the commands that may be used in your article. You may run LaTeX on this file to compare the results with the mark-up code within the file. This alone should indicate how to format your article in most cases.

THE TEMPLATE FILE

A template file, `w-bktmpl.tex` is provided to make it easier to enter the the initial article commands in the correct order. It should be self-explanatory. You are strongly urged to use this file as the basis of your formatted article. To do this you should:

- **Copy `w-bktmpl.tex` to `<yourfile>.tex`.**
- **Enter your text.**

SETTING OPTIONS

At the top of the w-bktmpl file you will see the following text and commands. You may use these commands to change the format if you or your editor want these changes made:

```
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%% How many levels of section head would you like numbered?
%% 0= no section numbers, 1= section, 2= subsection, 3= subsubsection
%%==>>
\setcounter{secnumdepth}{3}

%% How many levels of section head would you like to appear in the
%% Table of Contents?
%% 0= chapter titles, 1= section titles, 2= subsection titles,
%% 3= subsubsection titles.
%%==>>
\setcounter{tocdepth}{1}
%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
%
% DRAFT
% Uncomment to get double spacing between lines, current date and time
% printed at bottom of page.
% \draft
% (If you want to keep tables from becoming double spaced
% also uncomment this):
% \renewcommand{\arraystretch}{0.6}
```

BEGINNING THE BOOK

Authors should first enter whichever of the following commands are appropriate:

```
\booktitle{Submicron\\ Integrated Circuits}
\subtitle{This is the Subtitle}
\editionstatement{This is the edition statement}
\author{R.K. Watts}
```

Then, when the commands

```
\halftitlepage
\titlepage
\tableofcontents
```

are used, the half titlepage and titlepage will use which ever of the commands you entered.

Preface

You may use the commands below to make a preface. Notice that when you have sections, use the `\section*{}` **form of the command.**

```
\begin{preface}
text...
\section*{This is a preface section}
text...
\prefaceauthor{}
\where{}
\end{preface}
```

For example:

```
\begin{preface}
This is an example preface.
This is an example preface.
This is an example preface.
This is an example preface.
\section*{This is a preface section}
This is an example of a preface.
This is an example preface.
This is an example preface.
This is an example preface.
This is an example preface.
\prefaceauthor{R. K. Watts}
\where{Durham, North Carolina}
\end{preface}
```

Preface

This is an example preface. This is an example preface. This is an example preface. This is an example preface.

This is a preface section

This is an example of a preface. This is an example preface. This is an example preface. This is an example preface. This is an example preface.

R. K. Watts

Durham, North Carolina

Acknowledgments

If you'd like an acknowledgment section, these commands will do it:

```
\acknowledgments
text...
\authorinitials{} % ie, I. R. S.
```

For example:

```
\acknowledgments
From Dr.~Jay Young, consultant from Silver Spring, Maryland, I received
the initial push to even consider writing this book. Jay was a constant
``peer reader'' and very welcome advisor durying this year-long process.

To all these wonderful people I owe a deep sense of gratitude especially now
that this project has been completed.
\authorinitials{G. T. S.}
```

.....

Acknowledgments

From Dr. Jay Young, consultant from Silver Spring, Maryland, I received the initial push to even consider writing this book. Jay was a constant "peer reader" and very welcome advisor durying this year-long process.

To all these wonderful people I owe a deep sense of gratitude especially now that this project has been completed.

G. T. S.

Acronyms List

To make a list of acronyms, you may use the following commands:

`\acronyms` `\acro{<term>}{<definition>}`**, as in**

```
\acronyms
\acro{ACGIH}{American Conference of Governmental Industrial Hygienists}
\acro{AEC}{Atomic Energy Commission}
\acro{OSHA}{Occupational Health and Safety Commission}
\acro{SAMA}{Scientific Apparatus Makers Association}
```

Acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
AEC	Atomic Energy Commission
OSHA	Occupational Health and Safety Commission
SAMA	Scientific Apparatus Makers Association

Optional Introduction

There is an introduction environment which will make figures and tables and equations use 'I' for the Introduction chapter number. You may want to use the chapreference environment if you'd like to have references at the end of the Introduction.

The star form,
`\begin{chapreferences*}...\end{chapreferences*}`
works the same but will not send an entry to the Table of Contents, which you may prefer if you use chapreferences in your introduction or preface.

```
\introduction
The era of modern microchips began in the 1950s...
\begin{equation}
ABC {\cal DEF} \alpha\beta\Gamma\Delta\sum^{abc}_{def}
\end{equation}
This is the introduction.
This is the introduction.
This is the introduction.


\begin{chapreferences*}
\bibitem{kilby}J. S. Kilby,
``Invention of the Integrated Circuit,'' {\it IEEE Trans. Electron Devices,}
{\bf ED-23,} 648 (1976).

\bibitem{hamming}R. W. Hamming,
                 {\it Numerical Methods for Scientists and
                 Engineers}, Chapter N-1, McGraw-Hill,
                 New York, 1962.
\end{chapreferences*}
```

Introduction

The era of modern microchips began in the 1950s...

$$ABCDEF\alpha\beta\Gamma\Delta\sum_{def}^{abc} \tag{I.1}$$

This is the introduction. This is the introduction. This is the introduction.

REFERENCES

1. J. S. Kilby, "Invention of the Integrated Circuit," *IEEE Trans. Electron Devices,* **ED-23,** 648 (1976).

2. R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

Indexing Commands

This macro package includes an indexing method which should make it very easy to compile an index. There is a section later in this documentation with more complete information on all the things you can do when making an index, but here is a quick description:

The Index commands: `\inx{term}` **will print 'term' in text but will also send 'term' and its page number to the .inx file.**

`\inxx{term}` **will not print in text but will send term and its page number to the .inx file.**

`\inxx{term,second term}` **will not print in text but will send 'second term' to inx file to print underneath 'term' in the index.**

To make the index:

1) Run Latex on file,

2) Run sort routine on file (ie. `'sort filename.inx > filename.srt'` **on DOS, other commands on other systems), to produce a filename.srt file. 3)** `\printindex` **at end of book will input filename.srt and print index. The index will be in two columns, sequences of page numbers for the same entry will automatically have a dash between them, and subheadings will fall underneath their major headings.**

You can enter index commands in a figure or table caption, but please precede it with `\protect`

```
\begin{figure}[h]
\caption{\protect\inx{Oscillograph} for memory address access operations,
showing 500 ps address access time and \protect\inx{superimposed signals}.}%
\end{figure}
```

Using Optional square brackets

`\title[]{}`, `\part[]{}`, `\chapter[]{}`, `\section[]{}` and `\subsection[]{}` all allow you to enter the title in square brackets in the way you'd like it to appear in the Table of Contents, and in curly brackets in the way that you want the title to appear on the page in the body of the article. You can use `\\` to break lines in any of these commands within the curly brackets, and without `\\` within square brackets. This means that you can break lines easily in the body of the article without causing confusion in the Table of Contents.

Chapter Head and Prologue

The chapter head is made as you would expect. Please note that you should supply whatever version of the chapter head you'd like to appear on the running head in square brackets, if it is different from the chapter head, especially if you have have used `\\`.

```
\chapter[The Submicrometer Silicon MOSFET]
{The Submicrometer\\ Silicon MOSFET}
```

Prologue

The prologue is an entirely optional addition to the title page. If you should choose to use a prologue, here is the command to use:

```
\prologue{This is a sample prologue}{Author Attribution}
```

On the following page is a sample chapter beginning:

```
\chapter[The Submicrometer Silicon MOSFET]
{The Submicrometer\\ Silicon MOSFET}

\prologue{The sheer volumn of answers can often stifle insight...The purpose
of computing\inxx{computing,the purpose} is insight, not numbers.}
{Hamming \cite{hamming}}
```

1

The Submicrometer Silicon MOSFET

The sheer volumn of answers can often stifle insight...The purpose of computing is insight, not numbers.

—Hamming [2]

MAKING SECTIONS

Making section heads with the Wiley macros is just the same as normal LaTeX:

```
\section{Sample Section Head}
Here is some normal text. Here is some normal text.
Here is some normal text. Here is some normal text.
Here is some normal text. Here is some normal text.

\subsection{This Is the Subsection}
Here is some normal text. Here is some normal text.
Here is some normal text. Here is some normal text.

\subsubsection{This Is the Subsubsection}
Here is some normal text. Here is some normal text.
Here is some normal text.

\paragraph{This Is a Paragraph}
Here is some normal text. Here is some normal text.
Here is some normal text.
```

1.1 SAMPLE SECTION HEAD

Here is some normal text. Here is some normal text. Here is some normal text. Here is some normal text. Here is some normal text. Here is some normal text. Here is some normal text.

1.1.1 This is the subsection

Here is some normal text. Here is some normal text. Here is some normal text. Here is some normal text.

1.1.2 This is the subsubsection

Here is some normal text. Here is some normal text. Here is some normal text.

This is a paragraph Here is some normal text. Here is some normal text. Here is some normal text.

TIPS ON SPECIAL SECTION HEADS

Here are some things you can do for special section heads.

You can use \\ to start a new line in the \section and \subsection. When you use the \\, remember to also supply a name without \\ within square brackets to send a section title to the Table of Contents without \\ in it.

```
\section[This Version of Section Head will be sent Contents]
{Break Long Section heads\\ with double backslash}
Here is some normal text.
Here is some normal text.
Here is some normal text.

 \section[This show how to explicitly break lines
\string\hfill\string\break\space in Table of Contents]
{Here is a Section Title}
See the code for this section head for information on
how to explicitly break lines in table of contents.


\section{How to get \lowercase{lower case} in section head:
\lowercase{$p$}$H$}
Here is some normal text.
Here is some normal text.
Here is some normal text.
```

1.2 BREAK LONG SECTION HEADS WITH DOUBLE BACKSLASH

Here is some normal text. Here is some normal text. Here is some normal text.

1.3 HERE IS A SECTION TITLE

See the code for this section head for information on how to explicitly break lines in table of contents.

1.4 HOW TO GET lower case IN SECTION HEAD: pH

Here is some normal text. Here is some normal text. Here is some normal text.

How to Make a Section Head Containing a Macro with Upper and Lower Cases

```
%% (This is entered before \begin{document})
%% To get a macro to expand correctly in a section head, with upper and
%% lower case math, put the definition and set the box
%% before \begin{document}, so that the table of contents will also
%% work:
\newcommand{\VT}[1]{\ensuremath{{V_{T#1}}}}
%% use a box to expand the macro before we put it into the section head:
\newbox\sectsavebox
\setbox\sectsavebox=\hbox{\VT{xyz}}

...


\section{How to use a macro that has both upper and lower case parts:
\copy\sectsavebox}
The definition and box need to be set before the \verb+\tableofcontents+
command for the Contents to format correctly.

%% Sending different version of section to running head,
%% so that the size of math is correct in running head:
\markright{Sample macro \VT{\lowercase{xyz}} sent to running head}
```

1.5 HOW TO USE A MACRO THAT HAS BOTH UPPER AND LOWER CASE PARTS: V_{Txyz}

The definition and box need to be set before the `\tableofcontents` command for the Contents to format correctly.

INDENTED TEXT AND LISTS

The Wiley Monograph Book style uses standard LaTeX methods to produce indented text and lists. Following are some examples of the results in this style.

To Indent Text:

```
If an example satisfies the seed of a clause, then it satisfies the clause
as well. In addition, seeds have the following property:

\begin{itemize}
\item[]
If a seed of clause $c_T$, and example {\it x} satisfies $c_T$ but
not $c$, then {\it x} has at least one attibute in $c_T$ that
is not in $c$.\hfill(\dc{\tt*})
\end{itemize}
The procedure below...
```

If an example satisfies the seed of a clause, then it satisfies the clause as well. In addition, seeds have the following property:

> If a seed of clause c_T, and example $\mathbf{x}$ satisfies c_T but not c, then $\mathbf{x}$ has at least one attibute in c_T that is not in c. (*)

The procedure below...

Bulleted List

Here is an example of a bulleted list:

```
\begin{itemize}
\item
for every $x\in A$ and for...

\item
for every $x_1$, $x_2$ and for every...
\end{itemize}
```

- for every $x \in A$ and for...
- for every x_1, x_2 and for every...

Numbered List

Here is an example of a numbered list:

```
\begin{enumerate}
\item If $n/n_1=2$ then the Second multiplier Theorem holds without the
assumption, provided that one of the following conditions holds:

\begin{enumerate}
\item The first situation.

\item The second situation.
\end{enumerate}

\item If $n/n_1=3$ then in the majority of cases the assumption may be removed.
\end{enumerate}
```

1. If $n/n_1 = 2$ then the Second multiplier Theroem holds without the assumption, provided that one of the following conditions holds:

   (a) The first situation.

   (b) The second situation.

2. If $n/n_1 = 3$ then in the majority of cases the assumption may be removed.

CAPTIONS

The commands for making table or figure captions are the same in this macro set as they are in normal LaTeX:

```
\begin{figure}
(optional space left here)
\caption{Here is the figure caption.}
\end{figure}
```

or,

```
\begin{table}
\caption{Here is the table caption.}
\begin{tabular}...
\end{tabular}
\end{table}
```

Side by Side Captions

With this macro set there is an additional command that allows you to position a number of captions side by side in a single table or figure environment. In general terms, the macro is used like this:

```
\begin{figure or table} \sidebyside{}{} \end{figure or table}
```

Put a caption into each set of curly brackets and the captions will print next to each other:

```
\begin{figure}[ht]
\sidebyside{Space for figure...
\caption{This caption will go on the left side of
the page. It is the initial caption of two side-by-side captions.}}
{space for figure...
\caption{This caption will go on the right side of
the page. It is the second of two side-by-side captions.}}
\end{figure}
```

Space for figure...

Fig. 1.1 This caption will go on the left side of the page. It is the initial caption of two side-by-side captions.

space for figure...

Fig. 1.2 This caption will go on the right side of the page. It is the second of two side-by-side captions.

The command `\sidebyside{}{}` works similarly for tables:

```
\begin{table}
\sidebyside{\caption{table caption} first table}
{\caption{table caption} second table}
\end{table}
```

Table 1.1 table caption
first table

Table 1.2 table caption
second table

Caution when Cross Referencing

When using `\sidebyside`, one must use the cross referencing command `\label{}` after and *outside* of `\caption{}`:

```
\begin{table}
\sidebyside{
\caption{table caption}
\label{tab1} %<=== Label OUTSIDE caption!
first table... etc.}{}
```

MAKING TABLES

There are two aspects of making tables with this macro package that need to be mentioned.

First, you need to enter commands as you see in the section 'Normal Tables' below, in order to have the table have the correct appearance.

Second, since these table macros are made to make it easy to make tables with the correct appearance for this style, you must go to some extra effort if you want to make a table with vertical lines in it.

Normal Tables

In order to make your table conform to the Wiley Monograph Book specification you must follow several steps.

- Use `\hline` underneath the column headers.
- You are discouraged from using vertical lines in tables, but it you must include vertical lines, you must also use `\savehline` instead of `\hline` or there will be a gap between the vertical and horizontal lines. (`\hline` has been redefined to add some vertical space above and below it.)
- Make your table span the full page width if possible.

The following example shows these steps being followed and the form of the table preamble that will cause the table to spread out to the width of the page:

```
\begin{table}[h]
\caption{This is an example table caption. If there is
enough text it will form a paragraph.}
\begin{tabular*}{\hsize}{@{\extracolsep{\fill}}lcr}
$\alpha\beta\Gamma\Delta$ One&Two&Three\cr
\hline
one&two&three\cr
one&two&three\cr
\end{tabular*}
\end{table}
```

Table 1.3 This is an example table caption. If there is enough text it will form a paragraph.

$\alpha\beta\Gamma\Delta$ One	Two	Three
one	two	three
one	two	three

Making Table Notes

Table notes are made by entering the symbol that you want to use in math mode in a superscript. At the end of the table, please enter the command `\begin{tablenotes}` **and enter the notes, as seen below.**

```
\begin{table}[t]
\caption{Effects of the Two Types of Scaling Proposed by \protect\inx{Dennard}
and Co-Workers.$^{a,b}$}
\begin{tabular*}{\textwidth}{@{\extracolsep{\fill}}lcc}
\hline
Parameter& $\kappa$ Scaling & $\kappa$, $\lambda$ Scaling\cr
\hline
Dimension&$\kappa^{-1}$&$\lambda^{-1}$\cr
Voltage&$\kappa^{-1}$&$\kappa^{-1}$\cr
Currant&$\kappa^{-1}$&$\lambda/\kappa^{2}$\cr
Dopant Concentration&$\kappa$&$\lambda^2/\kappa$\cr
\hline
\end{tabular*}
\begin{tablenotes}
$^a$Refs.~19 and 20.

$^b\kappa, \lambda>1$.
\end{tablenotes}
\end{table}
```

Table 1.4 Effects of the Two Types of Scaling Proposed by Dennard and Co-Workers.[a,b]

Parameter	κ Scaling	κ, λ Scaling
Dimension	κ^{-1}	λ^{-1}
Voltage	κ^{-1}	κ^{-1}
Currant	κ^{-1}	λ/κ^2
Dopant Concentration	κ	λ^2/κ

[a] Refs. 19 and 20.

[b] $\kappa, \lambda > 1$.

Tables with Vertical Lines

Notice in the previous examples that no vertical lines were used. If at all possible to make your meaning clear without vertical lines, please leave them out. However, if you really must use vertical lines, you must use `\savehline` instead of `\hline`. Here is the previous example, redone, using vertical lines. (Notice that we use `{tabular}` instead of `{tabular*}`)

```
\begin{tabular}{||l||c|c||}
\savehline
Parameter& $\kappa$ Scaling & $\kappa$, $\lambda$ Scaling\cr
\savehline
Dimension&$\kappa^{-1}$&$\lambda^{-1}$\cr
Voltage&$\kappa^{-1}$&$\kappa^{-1}$\cr
Currant&$\kappa^{-1}$&$\lambda/\kappa^{2}$\cr
Dopant Concentration&$\kappa$&$\lambda^2/\kappa$\cr
\savehline
\end{tabular}
```

Parameter	κ Scaling	κ, λ Scaling
Dimension	κ^{-1}	λ^{-1}
Voltage	κ^{-1}	κ^{-1}
Currant	κ^{-1}	λ/κ^2
Dopant Concentration	κ	λ^2/κ

But that looks pretty ugly, so we fix it by adding an extra letter to the end of the preamble, calling for a column that we never use, and that makes the vertical and horizontal lines meet correctly:

```
\begin{tabular}{||l||c|c||c}
\savehline
Parameter& $\kappa$ Scaling & $\kappa$, $\lambda$ Scaling\cr
\savehline
Dimension&$\kappa^{-1}$&$\lambda^{-1}$\cr
Voltage&$\kappa^{-1}$&$\kappa^{-1}$\cr
Currant&$\kappa^{-1}$&$\lambda/\kappa^{2}$\cr
Dopant Concentration&$\kappa$&$\lambda^2/\kappa$\cr
\savehline
\end{tabular}
```

Parameter	κ Scaling	κ, λ Scaling
Dimension	κ^{-1}	λ^{-1}
Voltage	κ^{-1}	κ^{-1}
Currant	κ^{-1}	λ/κ^2
Dopant Concentration	κ	λ^2/κ

The table on the previous page looks almost acceptable, but we can certainly improve it by adding more space above and below the lines in each column. We do this by adding this
`@{\vrule height 11pt depth4pt width0pt\hskip\arraycolsep}`,
to the preamble, which produces a vertical line with no width and some horizontal space in each line in the table:

```
\begin{tabular}
{||l@{\vrule height 11pt depth4pt width0pt\hskip\arraycolsep}||c|c||c}
\savehline
Parameter& $\kappa$ Scaling & $\kappa$, $\lambda$ Scaling\cr
\savehline
Dimension&$\kappa^{-1}$&$\lambda^{-1}$\cr
Voltage&$\kappa^{-1}$&$\kappa^{-1}$\cr
Currant&$\kappa^{-1}$&$\lambda/\kappa^{2}$\cr
Dopant Concentration&$\kappa$&$\lambda^2/\kappa$\cr
\savehline
\end{tabular}
```

Parameter	κ Scaling	κ, λ Scaling
Dimension	κ^{-1}	λ^{-1}
Voltage	κ^{-1}	κ^{-1}
Currant	κ^{-1}	λ/κ^2
Dopant Concentration	κ	λ^2/κ

TO ILLUSTRATE AN ALGORITHM

The `\begin{algorithm}...\end{algorithm}` may be used to illustrate an algorithm.

- **Spaces and blank lines will be preserved. Math and font changes may be used.**
- **Line beginnings may be positioned with a `\` , which may be used as many times as you need. A backslash followed by a space will provide a space a bit wider than the width of 2 'M's.**
- **If you want to break lines on the screen but not break the line in the results, use '%' at the end of line, as you see in the fifth line in this example.**
- **The command `\bit` will produce bold italics if you are using PostScript fonts, boldface in Computer Modern.**
- **`\note{}` will position the note on the right margin.**

```
\begin{algorithm}
{\bit Evaluate-Single-FOE} ({\bf x$_f$, I$_0$, I$_1$}):
\ {\bf I}+ := {\bf I}$_1$;
\ ($\phi,\theta$) := (0,0);
\ {\it repeat}\note{/*usually only 1 interation required*/}
\ \ (s$_{opt}${\bf E}$_\eta$) := {\bit Optimal-Shift}%
  ({\bf I$_0$,I$^+$,I$_0$,x$_f$});
\ \ ($\phi^+$, $\theta^+$) := {\bit Equivalent-Rotation} ({\bf s}$_{opt}$);
\ \ ($\phi$, $\theta$) := ($\phi$, $\theta$) + ($\phi^+$, $\theta^+$);
\ \ {\bf I}$^+$:= {\bit Derotate-Image} ({\bf I}$_1$, $\phi$, $\theta$);
\ \ {\it until} ($|\phi^+|\leq\phi_{max}$ \& $|\theta^+|\leq\theta_{max}$);
\ {\it return} ({\bf I}$^+$, $\phi$, $\theta$, E$_\eta$).
End pseudo-code.
\end{algorithm}
```

```
Evaluate-Single-FOE ( x_f, I_0, I_1):
   I+ :=  I_1;
  (φ,θ) := (0,0);
   repeat                              /*usually only 1 interation required*/
     (s_opt E_η) := Optimal-Shift    ( I_0,I^+,I_0,x_f);
     (φ^+, θ^+) :=  Equivalent-Rotation ( s_opt);
     (φ, θ) := (φ, θ) + (φ^+, θ^+);
      I^+:=  Derotate-Image ( I_1, φ, θ);
      until (|φ^+| ≤ φ_max & |θ^+| ≤ θ_max);
   return ( I^+, φ, θ, E_η).
End pseudo-code.
```

LANDSCAPE ALGORITHM ENVIRONMENT

If you have extensive code examples and would like to position them in landscape mode, the following environment will help. It also supplies a box around the code, and a ruled line between the two columns.

These macros do not turn the page to landscape mode; you will have to do that with your driver program, the program that changes the .dvi file to a .ps file. (Dvipsone, and dvips are two common PC driver programs. TeXtures for the Mac includes a driver program when you click on print. You must consult the documentation for your driver program to determine how to turn a page to landscape mode.) You may need to adjust the positioning of the code material on the physical page. These commands are available. You can experiment until the page is positioning correctly.

```
\landscapeoddpagedown=10pt %% move code down on odd numbered page
\landscapeevenpagedown=79pt%% move code down on even numbered page
\landscapepagetoright=1in  %% move code to the right on either odd or even pages
```

The commands to use are:

```
\programcaption{Caption for the code example}%% <== optional command
\colone
 \begin{verbatim}
 code...
 \end{verbatim}
\endcolone
\coltwo
\begin{verbatim}
code...
 \end{verbatim}
\endcoltwo
```

The command `\endcoltwo` **will position the two boxes that have been formed with the previous commands.**

Notice that you must write `\begin{verbatim}` **and** `\end{verbatim}` **before and after each of your code fragments.**

The command `\programcaption{<caption>}` **is optional. It will make a normal figure caption at the bottom of the code example.**

If you want to make a code example that uses only one box, please supply the second box anyway, just don't put anything in it:

```
\programcaption{Caption for the code example}%% <== optional command
\colone
\begin{verbatim}
code...
 \end{verbatim}
\endcolone
\coltwo
 \endcoltwo
```

The vertical line that normally divides the two pages of code will not appear.

```
\programcaption{This is a program fragment
that finds the ground state wave function of a particle in a quadratic
potential using the Metropolis algorithm.}

\colone
\begin{verbatim}
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c  qmc.f: Finds ground state wave function of a particle in a          c
c         quadratic potential using the Metropolis algorithm.          c
...
 \end{verbatim}


\endcolone
\coltwo
\begin{verbatim}
c find the new energy
          newE=energy(path, 100)
...
 \end{verbatim}
 \endcoltwo
```

```
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
c  qmc.f: Finds ground state wave function of a particle in a          c
c         quadratic potential using the Metropolis algorithm.          c
c                                                                      c
c  taken from: "Projects in Computational Physics" by Landau and Paez  c
c              copyrighted by John Wiley and Sons, New York            c
c                                                                      c
c  written by: students in PH465/565, Computational Physics,           c
c              at Oregon State University                              c
c  supported by: US National Science Foundation, Northwest Alliance    c
c                for Computational Science and Engineering (NACSE),    c
c                US Department of Energy                               c
c                                                                      c
c  UNIX (DEC OSF, IBM AIX): f77 qmc.f                                  c
c                                                                      c
c  comment: If your compiler complains about drand48, srand48          c
c           uncomment the define statements further down.              c
c           This might take a couple of minutes.                       c
ccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccccc
        Program qmc
        Implicit none
        Integer i, j, max, element, prop(100)
        Real*8 change, drand48, energy, newE, oldE, out, path(100)
        max  = 250000
        Open(9, FILE='qmc.dat', Status='Unknown')
        call seed48(68111)
c initial path and initial probability
        Do 10 j=1,100
          path(j)=0.0
          prop(j)=0
 10     Continue
c find energy of initial path
        oldE = energy(path, 100)
        Do 20 i=1,max
c pick one random element
          element = drand48()*100+1
c change it by an random value -0.9..0.9
          change  = ((drand48()-0.5)*2)
          path(element)=path(element)+change
c find the new energy
          newE=energy(path, 100)
c reject change if new energy is greater and the Boltzmann factor
c is less than another random number
          If ((newE.GT.oldE) .AND. (exp(-newE+oldE).LT.drand48()))
          Then path(element)=path(element)-change
          Endif
c add up probabilities
          Do 30 j=1,100
            element=path(j)*10+50
            prop(element)=prop(element)+1
 30       Continue
          oldE = newE
 20     Continue
c write output data to file
        Do 40 j=1,100
          out=prop(j)
          Write(9,*) j-50, out/max
 40     Continue
        Close(9)
        Stop 'data saved in qmc.dat'
        End
c
c function calculates energy of the system
        Function energy(array, max)
        Implicit none
        Integer i, max
        Real*8 energy, array(max)
        energy=0
        Do 50 i=1,(max-1)
           energy=energy + (array(i+1)-array(i))**2 + array(i)**2
 50     Continue
        Return
        End
```

Fig. 1.3 This is a program fragment that finds the ground state wave function of a particle in a quadratic potential using the Metropolis

PROBLEM SETS

The commands need to make problem sets are: `\begin{problems}...\end{problems}`, `\prob` **and** `\subprob`. **Here is an example:**

```
\begin{problems}
\prob
For Hooker's data, Problem 1.2, use the Box and Cox and Atkinson
procedures to determine a appropriate transformation of PRES
in the regression of PRES on TEMP. find $\hat\lambda$, $\tilde\lambda$,
the score test, and the added variable plot for the score.
Summarize the results.

\prob
The following data were collected in a study of the effect of dissolved sulfur
on the surface tension of liquid copper (Baes and Killogg, 1953).

{\centering
\vskip6pt
\begin{tabular}{rlcc}
\hline
&&\multicolumn2c{$Y$= Decrease in Surface Tension}\\
\multicolumn2c{$x$ = Weight \% sulfur}
&\multicolumn2c{(dynes/cm), two Replicates}\\
\hline
```

```
0.&034&301&316\\
0.&093&430&422\\
0.&30&593&586\\
\hline
\end{tabular}
\vskip6pt
}

\cinx{subprob}
\subprob
Find the transformations of $X$ and $Y$ sot that in the transformed scale
the regression is linear.

\subprob
Assuming that $X$ is transformed to $\ln(X)$, which choice of $Y$ gives
better results,
$Y$ or $\ln(Y)$? (Sclove, 1972).

\prob
Examine the Longley data, Problem 3.3, for applicability of assumptions of the
linear model.
\end{problems}
```

Problems

1.1 For Hooker's data, Problem 1.2, use the Box and Cox and Atkinson procedures to determine a appropriate transformation of PRES in the regression of PRES on TEMP. find $\hat{\lambda}$, $\tilde{\lambda}$, the score test, and the added variable plot for the score. Summarize the results.

1.2 The following data were collected in a study of the effect of dissolved sulfur on the surface tension of liquid copper (Baes and Killogg, 1953).

x = Weight % sulfur	Y = Decrease in Surface Tension (dynes/cm), two Replicates	
0. 034	301	316
0. 093	430	422
0. 30	593	586

1.2.1. Find the transformations of X and Y sot that in the transformed scale the regression is linear.

1.2.2. Assuming that X is transformed to $\ln(X)$, which choice of Y gives better results, Y or $\ln(Y)$? (Sclove, 1972).

1.3 Examine the Longley data, Problem 3.3, for applicability of assumptions of the linear model.

END MATTER

There are several commands that can be used at the end of a chapter or at the end of the book. To distinguish between them we have `\chapreferences` and `\references` and `\chapappendix` and `\appendix`. The commands are used in the same way but are formatted differently when they appear in the body of the chapter as opposed to the end of the book.

In addition we have the Glossary and Index commands to use at the end of the book, which we will see in examples in following sections.

CHAPTER REFERENCES

References are done as in most LaTeX styles, written in a reference section with each reference preceded by `\bibitem{<biblabel>}`. The `\cite{<biblabel>}` command should be used to reference the bibliography labels. Here is an example using chapreferences:

```
As seen in reference \cite{beren}, we can definitely conclude.

\begin{chapreferences}
\bibitem{kilby}J. S. Kilby,
``Invention of the Integrated Circuit,'' {\it IEEE Trans. Electron Devices,}
{\bf ED-23,} 648 (1976).

\bibitem{hamming}R. W. Hamming, {\it Numerical Methods for Scientists and
Engineers}, Chapter N-1, McGraw-Hill, New York, 1962.
```

```
\bibitem{beren}A. Berenbaum, B. W. Colbry, D.R. Ditzel, R. D Freeman, and
K.J. O'Connor, ``A Pipelined 32b Microprocessor with 13 kb of Cache Memory,''
{\it Int. Solid State Circuit Conf., Dig. Tech. Pap.,} p. 34 (1987).
\end{chapreferences}
```

As seen in reference [3], we can definitely conclude.

REFERENCES

1. J. S. Kilby, "Invention of the Integrated Circuit," *IEEE Trans. Electron Devices,* **ED-23,** 648 (1976).

2. R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

3. A. Berenbaum, B. W. Colbry, D.R. Ditzel, R. D Freeman, and K.J. O'Connor, "A Pipelined 32b Microprocessor with 13 kb of Cache Memory," *Int. Solid State Circuit Conf., Dig. Tech. Pap.,* p. 34 (1987).

Alternate Reference Form: Chapter Named References

To use the name-and-year form of reference, follow this example. Notice that you supply the widest bib term in curly brackets after `{namedchapreferences}`**.**

```
Sample named chapter reference citation: \cite{kil76}, \cite{ham62}.

\begin{namedchapreferences}{kill}
\bibitem[kill]{kilby}J. S. Kilby,
``Invention of the Integrated Circuit,'' {\it IEEE Trans. Electron Devices,}
{\bf ED-23,} 648 (1976).

\bibitem[ham]{hamming}R. W. Hamming,
                {\it Numerical Methods for Scientists and
                Engineers}, Chapter N-1, McGraw-Hill,
                New York, 1962.

\bibitem[hum]{Hu}J. Lee, K. Mayaram, and C. Hu, ``A Theoretical
              Study of Gate/Drain Offset in LDD MOSFETs''
                    {\it IEEE Electron Device Lett.,} {\bf EDL-7}(3). 152
                    (1986).
\end{namedchapreferences}
```

Sample named chapter reference citation: [kil76], [ham62].

REFERENCES

[kil76] J. S. Kilby, "Invention of the Integrated Circuit," *IEEE Trans. Electron Devices,* **ED-23,** 648 (1976).

[ham62] R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

[hum86] J. Lee, K. Mayaram, and C. Hu, "A Theoretical Study of Gate/Drain Offset in LDD MOSFETs" *IEEE Electron Device Lett.,* **EDL-7**(3). 152 (1986).

USING BIBTEX FOR YOUR CHAPTER REFERENCES

Using BibTeX is a bit more effort, but the major advantage is that you can build a database of your references that you can reuse for other books or articles. To use BibTEX in a monograph book you must use two new commands: `\chapbblfile` and `\chapbibliography`, explained below. Follow these steps:

Make a .bib file

If you do not already have one or more .bib files, make a `xxx.bib` file, with '`xxx`' being any file name you choose. The .bib file or files are a database of references. Please see Leslie Lamport's *LATEX A Document Preparation System* for information on the form of entries in the .bib file.

Supply a Bibliography style

```
\bibliographystyle{plain}
```

Make sure that plain.bst in the same directory where you are working, or in a directory where BibTEX can find it when it is running.

Supply a .bbl file name

Write `\chapbblfile{<name of your bbl file>}`
with the name of your bbl file being the name of the file you are writing, i.e, if you are working in a file named chap1.tex, the name you should supply is

```
\chapbblname{chap1}
```

Run BibTeX on your file to produce a .bbl file

Write either `\cite{<label>}` or `\nocite{<label>}` for each reference that you want to appear in the bibliography. Each citation will make a matching entry appear in the bibliography.

\cite will produce a printed citation, \nocite will not print, but in either case he citation will appear in the finished bibliography.

Next you must write \chapbibliography{xxx}, with 'xxx' being the name of the .bib database file that you have written. You can also use more than one .bib file, in which case you must separate the filenames with a comma: \chapbibliography{xxx,yyy}.

For example:

```
Here are some more citations
\cite{dms80}, \cite{gm91}, \cite{hhmz77}, \cite{hb85},
\cite{kt78}. \nocite{kl94}

\bibliographystyle{plain}
\chapbblname{chap1}
\chapbibliography{bkbib}
```

Run BibTeX on the file. If the file is named chap1.tex you will produce a file named chap1.bbl.

Run LaTeX on your file to print your references

The next time you Run LaTeX on your file your references will appear.

! Be sure to send the .bbl file to Wiley at the same time you send your .tex file. !

END OF BOOK REFERENCES

To make a reference section at the end of the book, you use the either usual LaTeX commands, or

```
\begin{namedreferences}...\end{namedreferences}
```

```
\begin{references}
\bibitem{kilby}J. S. Kilby,
‘‘Invention of the Integrated Circuit,’’ {\it IEEE Trans. Electron Devices,}
{\bf ED-23,} 648 (1976).

\bibitem{hamming}R. W. Hamming,
                 {\it Numerical Methods for Scientists and
                 Engineers}, Chapter N-1, McGraw-Hill,
                 New York, 1962.

\bibitem{Hu}J. Lee, K. Mayaram, and C. Hu, ‘‘A Theoretical
               Study of Gate/Drain Offset in LDD MOSFETs’’
                     {\it IEEE Electron Device Lett.,} {\bf EDL-7}(3). 152
                     (1986).

\bibitem{beren}A. Berenbaum,
B. W. Colbry, D.R. Ditzel, R. D Freeman, and
K.J. O’Connor, ‘‘A Pipelined 32b Microprocessor with 13 kb of Cache Memory,’’
{\it Int. Solid State Circuit Conf., Dig. Tech. Pap.,} p. 34 (1987).
\end{references}
```

References

1. J. S. Kilby, "Invention of the Integrated Circuit," *IEEE Trans. Electron Devices,* **ED-23,** 648 (1976).

2. R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

3. J. Lee, K. Mayaram, and C. Hu, "A Theoretical Study of Gate/Drain Offset in LDD MOSFETs" *IEEE Electron Device Lett.,* **EDL-7**(3). 152 (1986).

4. A. Berenbaum, B. W. Colbry, D.R. Ditzel, R. D Freeman, and K.J. O'Connor, "A Pipelined 32b Microprocessor with 13 kb of Cache Memory," *Int. Solid State Circuit Conf., Dig. Tech. Pap.,* p. 34 (1987).

Alternative Reference Form: End of Book Named References

To use the name-and-year form of references at the end of the book, follow this example. Notice that you supply the widest bib term in curly brackets after `{namedchapreferences}`**.**

```
Sample named reference citation: \cite{kil76}, \cite{ham62}.

\begin{namedreferences}{kill}
\bibitem[kill]{kilby}J. S. Kilby,
‘‘Invention of the Integrated Circuit,’’ {\it IEEE Trans. Electron Devices,}
{\bf ED-23,} 648 (1976).

\bibitem[ham]{hamming}R. W. Hamming,
                {\it Numerical Methods for Scientists and
                Engineers}, Chapter N-1, McGraw-Hill,
                New York, 1962.

\bibitem[hum]{Hu}J. Lee, K. Mayaram, and C. Hu, ‘‘A Theoretical
              Study of Gate/Drain Offset in LDD MOSFETs’’
                    {\it IEEE Electron Device Lett.,} {\bf EDL-7}(3). 152
                    (1986).
\end{namedreferences}
```

Sample named reference citation: [kil76], [ham62].

References

[kil76] J. S. Kilby, "Invention of the Integrated Circuit," *IEEE Trans. Electron Devices,* **ED-23,** 648 (1976).

[ham62] R. W. Hamming, *Numerical Methods for Scientists and Engineers*, Chapter N-1, McGraw-Hill, New York, 1962.

[hum86] J. Lee, K. Mayaram, and C. Hu, "A Theoretical Study of Gate/Drain Offset in LDD MOSFETs" *IEEE Electron Device Lett.,* **EDL-7**(3). 152 (1986).

Using BibTeX for your references at the end of the book

BibTeX is a separate program which can be used with LaTeX to produce a database file and build a bibliography.

To use BibTeX for references at the end of the book follow these steps:

1. **Make a xxx.bib file, with 'xxx' being any file name you choose. This is the database file including all the references. The form that these entries should take is described in the LaTeX book.**
2. **In your .tex file enter** `\bibliographystyle{plain}`**.**

   Next you must write `\bibliography{xxx}`**, with 'xxx' being the name of the .bib database file that you have written. You can also use more than one .bib file, in which case you must separate the filenames with a comma:** `\bibliography{xxx,yyy}`**.**
3. **Write either** `\cite{<label>}` **or** `\nocite{<label>}` **for each reference that you want to appear in the bibliography.** `\cite` **will produce a printed citation,** `\nocite` **will not print, but in either case he citation will appear in the finished bibliography.**
4. **Run Latex on the .tex document, producing the usual .aux file.**
5. **Run BibTex on the .tex document, producing a .bbl file,**
6. **And, finally, run LaTeX on the .tex file, and Voila! your bibliography will appear where you have written** `\bibliography{<mybibfile>}`**,**

Citations made with `\cite` or `\nocite` are necessary to get entries into the `filename.bbl` when BibTeX is run on your file. Here are some sample citations, followed by a sample bibliography.

```
A citation will look like this, \cite{jst81,bm84}.
Here are some more citations;
\cite{dms80}; \cite{gm91}; \cite{hhmz77}; \cite{hb85}; \cite{kt78};
and \cite{jb:spectral}.

Here are sample ‘nocites’:\nocite{bhw:blproof}
\nocite{jb:uncert}\nocite{cw:cardspline}\nocite{id:signal}
\nocite{wh:frames}\nocite{vn:mfqm}. You see that nothing printed
where they were written.

Each citation will make a matching entry appear in the bibliography.
```

A citation will look like this, Jameson et al., 1981, Barrett and Morton, 1984. Here are some more citations; Doolan et al., 1980, Garcia-Archilla and Mackenzie, 1991, Heinrich et al., 1977, Hughes and Brooks, 1985, Kellog and Tsau, 1978, and Benedetto, 1975.

Here are sample ‘nocites’:. You see that nothing printed where they were written.

Each citation will make a matching entry appear in the bibliography.

Here is the sample bibliography that results:

```
\bibliographystyle{plain}
\bibliography{bkbib}
```

References

1. Barrett, J. W. and Morton, K. W. (1984). Approximate symmetrization and Petrov-Galerkin methods for diffusion-convection problems. *Comput. Methods Appl. Mech. Engrg.*, 45:97–122.

2. Benedetto, J. (1975). *Spectral Synthesis.* Academic Press, New York.

3. Daubechies, I. (1990). The wavelet transform, time-frequency localization and signal analysis. *IEEE Trans. Inform. Theory*, 36:961–1005.

APPENDICES

End of Chapter Appendices

For an appendix at the end of the chapter we have `\chapappendix{}`, used:

```
\chapappendix{}
This is a chapter appendix.
\begin{equation}\sum_k P(k) \sum_i \sum_y f_i(y|k)^2\end{equation}

\chapappendix{Pspace $\supseteq$ PCP(log n)}
....
```

Appendix

This is a chapter appendix.

$$\sum_k P(k) \sum_i \sum_y f_i(y|k)^2 \tag{A.1}$$

Appendix Pspace $\supseteq$ PCP(log n)

This is an appendix.

$$\sum_k P(k) \sum_i \sum_y f_i(y|k)^2 \tag{B.1}$$

APPENDIX AT THE END OF THE BOOK

Make your appendix with the command `\appendix{}`. If you want only one appendix, follow `\appendix` with facing curly brackets: `\appendix{}`. Section numbers, equation numbers, and captions will all use the appendix letter 'A' as well as their number.

```
\appendix{This Is the Appendix Title} This is an appendix with a title.
\begin{equation}
\alpha\beta\Gamma\Delta
\end{equation}

\begin{figure}[h]
\caption{This is an appendix figure caption.}
\end{figure}

\begin{table}[h]
\caption{This Is an Appendix Table Caption}
\centering
\begin{tabular}{ccc}
\hline
one&two&three\\
\hline
C&D&E\\
\hline
\end{tabular}
\end{table}
```

Appendix A This Is the Appendix Title

This is an appendix with a title.

$$\alpha\beta\Gamma\Delta \tag{A.1}$$

Fig. A.1 This is an appendix figure caption.

Table A.1 This Is an Appendix Table Caption

one	two	three
C	D	E

```
\appendix{}
This is an appendix without a title.

Here is a math test to show the difference between using Computer Modern
math fonts and MathTimes math fonts. When MathTimes math fonts are used
the letters in an equation will match TimesRoman italic in the text
({\it g, i, y, x, P, F, n, f} etc.). Caligraphic fonts, used for
$\cal ABC$ below, will stay the same
in either case.
\begin{equation}
g_i(y|f)=\sum_x P(x|F_n)f_i(y|x){\cal ABC}
\end{equation}
where $g_i(y|F_n)$ is the function specifying the probability an object will
display a value $y$ on a dimension $i$ given $F_n$ the observed feature
structure of all the objects.
```

Appendix B

This is an appendix without a title.

Here is a math test to show the difference between using Computer Modern math fonts and MathTimes math fonts. When MathTimes math fonts are used the letters in an equation will match TimesRoman italic in the text. (*g, i, y, x, P, F, n, f, etc.*) Caligraphic fonts, used for $\mathcal{ABC}$ below, will stay the same in either case.

$$g_i(y|f) = \sum_x P(x|F_n) f_i(y|x) \mathcal{ABC} \tag{B.1}$$

where $g_i(y|F_n)$ is the function specifying the probability an object will display a value y on a dimension i given F_n the observed feature structure of all the objects.

GLOSSARY

An optional glossary section is available. Its commands are very straightforward:

```
\begin{glossary}
\term{xxx}Text...
\term{yyy}Text...
\end{glossary}
```

Here is an example:

```
\begin{glossary}
\term{GaAs}Gallium Arsinide. For similar device sizes GaAs transistors
have three to
five times greater transconductance than those of of silicon bipolar
and MOS transistors.

\term{VLSI}Very Large Scale Integration. Since the mid-1970s
VLSI technology has been successfully used in many areas, but its effect on
computers of all shapes and sizes has been the most dramatic. Some of the
application areas got boosts in performance while others became
feasible.

\end{glossary}
```

Glossary

GaAs Gallium Arsinide. For similar device sizes GaAs transistors have three to five times greater transconductance than those of of silicon bipolar and MOS transistors.

VLSI Very Large Scale Integration. Since the mid-1970s VLSI technology has been successfully used in many areas, but its effect on computers of all shapes and sizes has been the most dramatic. Some of the application areas got boosts in performance while others became feasible.

MAKING YOUR INDEX

There are four steps needed to make an index:

- **Marking the words to be indexed in the text,**
- **Running LaTeX on the file,**
- **Sorting the `.inx` file, and**
- **Printing the formatted index.**

Each step will be explained briefly here, and in more detail in the following sections.

Marking the text

There are two kinds of index entries in the text:
`\inx{word or words}`**, and**
`\inxx{word or words}`**.**

The first form will print the term between curly brackets on the page and will also send it to an `.inx` file along with the current page number.

The second, called a 'silent' entry, will not print on the page but will send the material between curly brackets to the `.inx` file along with the current page number.

CAREFUL: **Do not leave an empty space between the silent index entry and the word preceding it. An extra space will appear in your text if there is a space both before and after the** `\inxx` **command. Your input should look like this:**

```
...some words\inxx{index entry}...
```

Not

```
...some words \inxx{index entry}...
```

Remember that starting a new line in your editor will also generate an empty space, so do not do this either:

```
...some words
\inxx{index entry}...
```

Subheadings in the Index

To form an index entry as a subheading of another index entry, repeat the first entry and follow it with the new entry.

For example:

After you have typed `\inx{trees}` **or** `\inxx{trees}`**,**

you may type `\inxx{trees,green}` **to cause 'green' and its associated page number to be placed in the index under the entry for 'trees.'**

A third level of subheading is produced in the same way:
`\inxx{trees,green,pointy}`**. This will format 'pointy' underneath the entry for 'green'.**

LaTeXing the file

When you LaTeX `filename.tex` containing the marked entries you will produce a `filename.inx`.

Sorting the .inx file

You can sort the `filename.inx` file with a sorting routine on your system.
The MS-DOS command is `sort < filename.inx > filename.srt`.
The Vax VMS command is `sort filename.inx filename.srt`.
The UNIX command is `sort -f filename.inx > filename.srt`.
Apparently there is no sort routine as part of the Macintosh software but there are public domain Macintosh sorting packages available.

Marking the .srt file

If you want to make additions to the index entries such as "See Also Douglas Firs" or to change the fonts of certain entries or to add a large letter and a ruled line before each new alphabetical group, you can do this in `filename.srt`. However, you do not need to even look at this file if you do not wish to make changes to the index.

For more information see "Making typeface changes to index entries" and "Adding material to your sorted file" below.

Printing the Index

The command: `\printindex` will print the index. This command will input the `filename.srt` file to generate your index, formed in double columns, with a dash between sequential page numbers and with subsidiary entries formatted below their major entry.

More information on each step follows.

Entering words to be indexed in the text

As described earlier, entries are to be marked either

```
\inx{(entry)}
```

or

```
\inxx{(entry)}
```

CAREFUL: **When you mark an index entry with `\inx` the word or words will print in the text as well as in the auxiliary file.**

However, don't try to use this method of marking a word or phrase if it is in the argument of another macro.

To index a word or words that are inside a macro argument, use the second method: rewrite the word or words outside the macro and precede it with `\inxx`. If in doubt follow the second method which may be slightly more effort, but whose results will be more predictable.

To call attention to a particular page number in the index:

You may mark index entries with one or two asterisks.

`\inx{index entry*}` **or** `\inxx{index entry*}` **will cause the page number to be underlined.**

`\inx{index entry**}` **or** `\inxx{index entry**}` **will cause the page number to appear in boldface. You may want to use this as a method of calling attention to the definition of a term (underlined) or an example of the term in use (boldface).**

Examples of first, second or third level index entries

As mentioned above, second level entries are produced by writing the primary term, then a comma, then the word you are indexing. For example, index entries written on a page 33:

`\inx{First level}` **(or** `\inxx{First level}`**)**
`\inxx{First level,second level}`
will yield the index entries

First level, 33
second level, 33

with the page numbers produced automatically.

The third level is produced similarly:

`\inx{First level}` **(or** `\inx{First level}`**)**
`\inxx{First level,second level}`
`\inxx{First level,second level,third level}`
Results in:

First level, 33
second level, 33
third level, 101

CAREFUL:

Spaces: **Notice that there are no spaces after the comma in the index entry. It is important to keep spaces from appearing between entry levels for the index formatter to work correctly.**

Consistency: **Capital and small letters will not be distinguished by the index formatter but will be sorted differently. Therefore you must be careful to be consistent in capitalization.**

Commas: **Since commas are used to separate arguments in the index entries, you must write `\,` when you actually want a comma to appear in the formatted index. For example:**

```
\inxx{Nixon\, Richard Milhous}
```

will print in the index as:

Nixon, Richard Milhous, 72

If you forgot to put the backslash in front of the comma after 'Nixon' as in the following:

```
\inxx{Nixon, Richard Milhous}
```

The results will be

Nixon
Richard Milhous, 72

How to make a first or second level entry Without page numbers

You may occassionally want to have a major or secondary index entry that doesn't have a page number associated with it, but is used as a heading for the following entries.

To do this, type the second or third level entries as you would do ordinarily, but do not make an index entry for the first level term by itself.

For example, if these `\inxx` **entries have been used in the text:**

```
\inxx{Cows,Holstein-Friesen}
\inxx{Cows,Jersey}
\inxx{Cows,holy}
```

The index will look like this:

Cows
- **Holstein-Friesen, 33**
- **holy, 23**
- **Jersey, 43**

The same sequence follows for second and third level entries; when the third level is being looked at by the index formatter it will check to see if the second level has been printed. If it hasn't the formatter will supply the second level entry without a page number.

The second level without a page number is produced like this:

```
\inxx{Cows,four-legged,black and white}
\inxx{Cows,four-legged,gentle brown}
\inxx{Cows,four-legged,invisible}
```

Results in:

Cows
four-legged
black and white, 101
gentle brown, 201
invisible, 32

Index Error Control

You might have inadvertantly neglected to supply a first level entry and asked for second or third level entries that were to appear under the first level entry. In this case the index formatter will supply the first level entry without a page number, just as if that was your intention. Similarly, if third level entries have been called for without the preceding second level entry ever being asked for by itself, the second level entry will print without a page number, as if that was your intention.

Thus, you have a method of index error control, that will let you know if you neglected to enter a term with `\inxx` that you intended. Scan your completed index to see if there are entries without page numbers. If this was not your intention, either edit your original file to supply the appropriate `\inxx` term, or edit the .srt file to supply the term and page number.

OK, the index entries are marked, now what?

The first thing to do is LaTeX the file that contains the marked index entries.

You will automatically produce an auxilary file named `filename.inx` with 'filename' being the name of the file you LaTeXed and the `.inx` extension being added automatically.

How to sort the .inx file

The next step is to sort the contents of the file. On a VAX running VMS, you do this by typing `sort filename.inx filename.srt`.
The UNIX command is `sort -f filename.inx > filename.srt`.
The MS-DOS command is `sort <filename.inx > filename.srt`.
If you are using another system, you must find the sorting command for that system.

Looking at the .srt file

You can look at the sorted file in your editor. Notice that the page numbers that are less than 10 will be preceded with two zeros, and those that are more than 10 but less than 100 will be preceded with one zero. These 'leading zeros' will not print but are necessary for the sort algorithm to work correctly.

Special use characters: > and ~

There is a '>' at the top of the `.srt` file and a '~' at the end of the file. These are commands to make the index formatter work correctly. > must immediately precede the index entries and ~ must immediately follow them, so do not change their position.

If you have use math in your index, you will notice that the math will end up at the top of the .srt file. You may move the math to whatever part of the file you want, but be sure that the > is a the top of the .srt file.

In other words, change this

```
$\Gamma (z)$, definition |{223}
$\Gamma (z)$, recursion formula |{223}
$\Gamma (z)$, reflection formula |{223}
>
```

to this:

```
>
$\Gamma (z)$, definition |{223}
$\Gamma (z)$, recursion formula |{223}
$\Gamma (z)$, reflection formula |{223}
```

and you might also move the gammas to the G section of the index.

You can use ~ as you would normally, except you *may not* use ~ at the beginning of an index entry (and I can think of no reason that you would want to) except as an accent (\~ ...).

Making changes in the .srt file

You can make typeface changes, add or delete index entries, add comments to the index with the `\addtoindex` command, and separate the index into alphabetical sections with the use of the `\ltr` command. However, remember: These changes will disappear the next time you sort the .inx file to produce a new `.srt` file.

Making typeface changes to index entries

If you want to change the typeface of an index entry, you can do this in your sorted file with these commands:

```
\indexit{index entry} |1{003}
\indexbf{index entry} |1{003}
\indextt{index entry} |1{003}
\indexsl{index entry} |1{003}
```

As you may have guessed, `\indexit` will produce *italics*, `\indexbf` will produce *bold face*, `\indextt` will produce `typewriter font`, and `\indexsl` will produce *slanted typeface*.

Assuming that you will be using this command on first level index entries, each of these commands will cause the first letter to be capitalized. If you want the first letter to be lowercase use this form:

```
\lcindexit{index entry} |1{003}
\lcindexbf{index entry} |1{003}
\lcindextt{index entry} |1{003}
\lcindexsl{index entry} |1{003}
```

If you change the typeface on any index entry, remember to do the same thing for every entry of the term on the same level. The reason that this is important is that the index formatter will not recognize two entries as being the same if one is '`\indexbf{index entry}`'

and the next is '`index entry`'. If the formatter sees the entries as different, the second entry would print on its own line.

Using addtoindex

If you want to add a comment to your index you can enter the commands `\addtoindex...\endadd`. These commands will temporarily interrupt the index formatter and allow you to enter text or extra vertical space at any point in the index. See examples of this in 'Indexing Examples' following.

If you want a horizontal line or lines to appear, write `\hrule`. You will probably want to include extra vertical space if you use `\hrule`s since there is no interline space added by default for hrules.

You must end `\addtoindex` with `\endadd`. Here is a complete example;

```
Grass |1{001}
\addtoindex
\seealso{Blue-green grass.}
\endadd
```

Making a page range to use with ff

If you want to direct your reader to a page range in which he/she will find information on a particular topic, you can use `\addtoindex`**:**

```
\addtoindex
Grass, 51--65 {\it ff}
\endadd
```

or

```
\addtoindex
\seealso{Grass, 51--65 {\it ff}}
\endadd
```

Separating index into alphabetical sections

The command `\ltr{Letter }` **makes it easy to format the index into separate alphabetical areas. Before the first entry for each new letter, use**
`\addtoindex`**,** `\ltr{Letter}`**,** `\endadd`**.**
For instance, before the B's:

```
\addtoindex
\ltr{B}
\endadd
```

Compare the code in the example at the end of this section with the resulting index to see this macro at work.

Other editing changes in the .srt file

You can also edit the `.srt` file in other ways, if you'd like. You can add or delete entries, or change the page number to appear underlined or bold by adding `\global\spcount =1` or `\global\spcount =2` within the curly brackets that surround the page number.

Formatting the Index

Once you have made any desired changes to your `.srt` file you can format the index in the originating file by writing this command where you want the index to appear:

```
\printindex
```

Changing the Format of the Index

Automatic Capitalization of the First Letter

Your index will be formatted automatically with the first letter of each first level index term being capitalized. The second and third level index terms will not print in uppercase unless they were typed that way with the `\inxx` command. If for any reason you do not like this, you can read the instructions at the end of the macro file where you see this:

```
%% CHANGE INDEX FORMAT HERE ====>

%% If you DO NOT want the first letter of each first level index
%% entry to be capitalized, delete the % in front of the
%% following line, and put % in front of the next line:

%\let\capthis\relax
\def\capthis#1{\uppercase{#1}}%

\indexindent=8pt %% indentation for index subentries
\indexwrap=24pt  %% indentation when term is too wide for column,
                 %% continues on following lines indented this much.
```

These commands can be changed to meet your requirements.

Indexing Examples

Sample of text marked for indexing

```
Here is \inx{Edward Bear*}, coming downstairs, bump, bump,bump,
on the back of his head, behind \inx{Christopher Robin}.  It is,
as far as he knows, the only way of \inx{coming downstairs}, but
sometimes he feels\inxx{coming downstairs,bumping}\inxx{coming
downstairs,stop bumping} that there really is another way, if
only he could stop bumping for a moment and think of it.
\newpage

And then he feels that perhaps there isn't.  Anyhow, here he is
at the bottom, and ready to be introduced to you\inxx{coming
downstairs,stop bumping,at the bottom}. \inx{Winnie-the-Pooh**}.

\subsection{One Day}
One day when he was out walking, he came to an open place in the
middle of the forest, and in the middle of this place was a
large \inx{oak-tree}, and, from the top of the tree, there came a
loud buzzing-noise.\inxx{oak-tree,large}\inxx{oak-tree,large,top}
\inxx{buzzing}\inxx{buzzing-noise}

Winnie-the-Pooh sat down at the foot of the tree, put his head
between his paws and began to think.\inxx{oak-tree,large,foot}
\inxx{trees,oak}\inxx{trees,maple}\inxx{trees,pine}
```

Sample .inx file

When TEX is run on the preceding text an `.inx` file will be made. It will look like this:

```
>
~
Edward Bear |{001\global \spcount =1}
Christopher Robin |{001}
coming downstairs |{001}
coming downstairs,bumping |{001}
coming downstairs,stop bumping |{001}
coming downstairs,stop bumping,at the bottom |{002}
Winnie-the-Pooh |{002\global \spcount =2}
oak-tree |{003}
oak-tree,large |{003}
oak-tree,large,top |{003}
...
```

Sample .srt file

The `.inx` file must be sorted to produce a .srt file. That file will look like the following example. Notice the leading zeros which are needed for the sorting algorithm to work correctly.

```
>
buzzing |{003}
buzzing-noise |{003}
coming downstairs |{001}
coming downstairs,bumping |{001}
coming downstairs,stop bumping |{001}
coming downstairs,stop bumping,at the bottom |{002}
Christopher Robin |{001}
Edward Bear |{001\global\spcount =1}
oak-tree |{003}
oak-tree,large |{003}
oak-tree,large,foot |{004}
oak-tree,large,top |{003}
...
~
```

Sample formatted index

The command `\printindex` will cause the .srt file to be input into the original file. Notice 'trees' which was never a first level entry, but is used as the first part of several second level entries, and so is formatted as an entry without a page number. The index will be formatted and look like this:

Buzzing, 3
Buzzing-noise, 3
Coming downstairs, 1
bumping, 1
stop bumping, 1
stop bumping
at the bottom, 2
Christopher Robin, 1
Edward Bear, 1
Oak-tree, 3
large, 3
foot, 4
top, 3
maple, 4
oak, 4
pine, 4
Winnie-the-Pooh, *2*

Making changes or additions to the .srt file

Here is the same .srt file with some comments added with \addtoindex, and Winnie-the-Pooh changed to boldface:

```
>
buzzing |{003}
buzzing-noise |{003}
\addtoindex
\seealso{oak-tree}
\endadd
coming downstairs |{001}
coming downstairs,bumping |{001}
coming downstairs,stop bumping |{001}
coming downstairs,stop bumping,at the bottom |{002}
Christopher Robin |{001}
\addtoindex
Christopher Robin's relationship to animals, 1--99 {\it ff}
\endadd
Edward Bear |{001\global\spcount =1}
oak-tree |{003}
oak-tree,large |{003}
oak-tree,large,foot |{004}
oak-tree,large,top |{003}
```

```
trees,maple |{004}
trees,oak |{004}
trees,pine |{004}
\indexbf{Winnie-the-Pooh} |{002\global\spcount =2}
~
```

Which will produce the index on the following page:

Buzzing, 3
Buzzing-noise, 3
See also **oak-tree**
Coming downstairs, 1
bumping, 1
stop bumping, 1
at the bottom, 2
Christopher Robin, 1
Christopher Robin's relationship to animals, 1–99 *ff*
Edward Bear, 1
Oak-tree, 3
large, 3
foot, 4
top, 3
maple, 4
oak, 4
pine, 4
Winnie-the-Pooh*, *2

Here is an example of using `\ltr` to separate the entries by their first letter and the results:

```
>
\addtoindex
\ltr{B}
\endadd
buzzing |{003}
\addtoindex
\seealso{Bees}
\endadd
buzzing-noise |{003}
\addtoindex
\ltr{C}
\endadd
\indexit{Christopher Robin} |{001}
coming downstairs |{001}
coming downstairs,bumping |{001}
coming downstairs,stop bumping |{001}
coming downstairs,stop bumping,at the bottom |{002}
\addtoindex
\ltr{E}
\endadd
Edward Bear |{001\global\spcount =1}
```

```
\addtoindex
\ltr{O}
\endadd
oak-tree |{003}
oak-tree,large |{003}
oak-tree,large,foot |{004}
oak-tree,large,top |{003}
\addtoindex
\ltr{W}
\endadd
Winnie-the-Pooh |{002\global\spcount =2}
~
```

Which when formatted, will look like this:

B

Buzzing, 3
See also **Bees**
Buzzing-noise, 3

C

Christopher Robin, **1**
Coming downstairs, 1
bumping, 1
stop bumping, 1
at the bottom, 2

E

Edward Bear, 1

O

Oak-tree, 3
large, 3
foot, 4
top, 3

W

Winnie-the-Pooh, *2*

FINAL TYPESETTING: INFORMATION FOR BOOK PRODUCTION

This is information for the company doing final typesetting on these books.

Fonts

For final typesetting you will want to use both the PostScript font file, `w-bookps.sty` and, optionally, the Math Times file for Times Roman Math, `m-times.sty`. Use them in this order:

```
\documentclass{w-book}
\usepackage[mtbold]{m-times}
\usepackage{w-bookps}
```

Both of these font files may be customized to match the names of the fonts found on your system.

w-bookps.sty

This file is distributed with the Berry font names, as they are probably in the most widespread use at this time. If your system uses another set of PostScript font names, you should edit the `w-bookps.sty` file so that it will call the PS names that are found on your system. Look at the top of the `w-bookps.sty` file for information on doing this, and you will find that making the changes is trivial, as long as you know the names of the PS fonts on your system.

m-times.sty

This file is also distributed with the Berry font names, so you may need to customize it as well. The changes that may be made are very similar to those which may be made to the `w-bookps.sty` file, and you should not have any problem with this. Information is found near the top of the `m-times.sty` file.

This style file will only produce TimeRoman math if you have both the Math Time and, for bold math, Math Time Plus font sets. These fonts are only available from a commercial vendor, Y & Y, of Concord MA.

```
web address: www.YandY.com,
email: sales-help@yandy.com
phone, in US: 800 742-4059, or,
       outside US: 978 371-3286
```

When you buy the Math Time fonts from Y & Y, you will receive a .sty file, called mathtime.sty. You are welcome to use mathtime.sty instead of m-times.sty, if you prefer. However, m-times.sty is easily customizable, and also will allow a number of characters such as `\dagger` and `\ddagger` print correctly even if the LY1 or TS1 font encoding systems are not used. It also includes the necessary .fd files, which may save you some trouble.

If you do need to buy Math Time fonts, you must also get Math Time Plus package, so that you can use the mtbold option: `\usepackage[mtbold]{m-times}`. If mtbold is *not* used, bold math will print as non-bold.

Another option you may use is noTS1, if you get an error message indicating that there are missing TS1 fonts: `\usepackage[mtbold,noTS1]{m-times}` A description of the other optional arguments (taken from the file mtoptions.txt) is found at the end of the `m-times.sty`, after `\endinput`.

USING THE WILEY MONOGRAPH BOOK STYLE WITH SCIENTIFIC WORD/WORKPLACE 3.0

(If you have earlier versions of Scientific Word/Workplace, please upgrade to Version 3.0.)

Evaluation of SWP

Scientific Word/Workplace is a program that makes writing a LaTeX document easy, even if the author knows nothing about TeX or LaTeX. (Scientific Word and Scientific Workplace differ only in that the Maple Math software is included in Scientific Workplace. We will refer to both programs with the abbreviation 'SWP'.)

SWP is essentially a word and math processor in which the author enters text and clickable tags and the program compiles and produces a valid LaTeX file. This means that the author can be almost completely ignorant of TeX commands and syntax and yet produce a perfectly acceptable LaTeX file.

In addition there are a number of other features that make this package attractive to authors: Scientific Workplace includes the Maple math software so that within one's document calculations may be done and mathematical graphs may be constructed that may be printed in the final LaTeX document. The downside is that unless that file is recompiled using a TeX system that can use PostScript font calls, the author is stuck with Computer Modern fonts, which are fine for math but not optimal for chapter heads and stylistic elements.

However the file can be easily re-LaTeXed using LaTeX outside of SWP. Then the PostScript font calls may be used as long as whoever does the re-LaTeXing writes `\usepackage{w-bookps}` after having edited the w-bookps.sty file so that the font calls match the PostScript font names on their system.

There is downtime necessary to get accustomed to the software and some set-up time needed to get SWP to work with the Wiley w-book.cls file, but some authors may feel that this is more than compensated for by ease of use of the program and ease of entry of mathematical symbols and notation. For those authors who want to use w-book.cls with SWP, the following information is necessary.

Getting w-book.cls to work with SWP

Here are the names of the files that are necessary to use when formatting your book with SWP using the Wiley Monograph Book files.

```
Concise explanation of how to use w-book.cls with SWP
   SWP-book.txt

The basic w-book macro file, identical to that used outside of SWP.
   w-book.cls

Shell files used by SWP:
   w-book.shl
   w-bksamp.shl
   w-bkdoc.shl

SWP compatible versions of the w-bksamp.tex and w-book.doc files:
   w-bksamp.swp
   w-bkdoc.swp
```

Step 1: Drop Files Into SWP Directories

Drop these files into appropriate directories:

```
Drop these files into directory \swp30\shells\books
   w-book.shl
   w-bksamp.shl
   w-bkdoc.shl


Drop these files directory \swp30\tcitex\tex\latex\tci
  w-book.cls
  w-bksamp.swp
  w-bkdocs.swp
```

Step 2: Setting Defaults in SWP

Start Scientific Workplace, then

```
In the File menu, click New
When the New window pops up,
   under Shell Directories: highlight Books
   under Shell Files: highlight w-book
   Click OK

In the Tools menu, click User Setup
   under Start-up Document
        under Shell Directories: highlight Books
        under Shell Files: highlight w-book
   Click OK

   under Files
       near bottom of window you will see 'Default Document Types'
         In the Open Type: bring up-- LaTeX(*.tex)
         In the Save As Type: bring up-- Portable LaTeX(*.tex)
   Click OK
```

Step 3: Viewing and/or Printing Sample Pages

To see the sample pages followed by verbatim marked up text that produced the pages, showing the commands that were needed:

```
Under File, select New

   When the New window pops up,
     under Shell Directories: highlight Books
     under Shell Files: highlight w-bksamp
   Click OK

Either:
Click the third button from the far right of the menu to Typeset
this document to print the sample pages

or,
Click the second button from the far right of the menu to Preview
this document to view the sample pages
```

Step 4: Viewing and/or Printing w-book Documentation

To see Wiley Documentation for Monograph books done with the w-book.cls style:

```
Under File, select New

   When the New window pops up,
     under Shell Directories: highlight Books
     under Shell Files: highlight w-bkdocs
   Click OK

Either:
Click the third button from the far right of the menu to Typeset
this document to print the documentation.

or,
Click the second button from the far right of the menu to Preview
this document to view the documentation.
```

Notes on Documentation

You will see references in the documentation to both font issues and the use of the template file. Neither of these comments applies to your document in SWP. You can see the commands you need to enter by looking at the Preview or typeset version of w-bksamp, as noted above. You will have to enter these commands without the help of a template file. Font issues are discussed below.

Starting Your Book

To start your document,

```
In the File menu, click New
When the New window pops up,
   under Shell Directories: highlight Books
   under Shell Files: highlight w-book
   Click OK

Use 'Save as' under the File menu, to give this file the name you want.
```

Entering LaTeX Commands

Although you can pick many commands from the Tag menu and thus don't have to type them in, there are some commands that are included in the w-book.cls file that are not found on that menu. In addition there may be other circumstances in which you would like to enter a LaTeX command, i.e., `\setcounter{page}{<number>}`.

In SWP, you are not allowed to simply type LaTeX commands into your file. However, you can highlight the Insert menu, go down to the bottom of it, highlight 'fields' and then go to 'TeX'. A screen will pop up, into which you can write any LaTeX command that you'd like to have in your file. Click on 'ok' and the screen will disappear leaving a grey box on the screen saying 'TeX field'. When you run 'preview' from the file menu, whatever was in the 'TeX field' will be expanded and will appear in your file.

Fonts with SWP

If you follow the directions above, your book will be typeset using ComputerModern fonts.

If you would like to use PostScript fonts, which will give your book a somewhat more finished appearance, you should run LaTeX your files using LaTeX outside of ScientificWord/Workplace. Fortunately, when using SWP, you can save your files in a form that will be understood by any standard LaTeX system.

To rerun your file produced with SWP, you need to do two things:

- **Edit the w-bookps.sty file to have it match the names of the PS fonts for Times, Helvetica, and Courier on the system that you are using.**
- **You will find the .tex file you have produced while working with SWP in the `\swp30\docs` directory. Edit this file to add the line `\usepackage{w-bookps}`:**

```
\documentclass{w-book}
\usepackage{w-bookps}
```

This file is then ready to run with LaTeX outside of SWP in order to produce your book with PS fonts.

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