Baskerville

Articles may be submitted via electronic mail to `baskerville@tex.ac.uk`, or on MSDOS-compatible discs, to Sebastian Rahtz, Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, to whom any correspondence concerning *Baskerville* should also be addressed.

This reprint of *Baskerville* is set in Times Roman, with Computer Modern Typewriter for literal text; the source is archived on CTAN in `usergrps/uktug`.

Back issues from the previous 12 months may be ordered from UKTUG for £2 each; earlier issues are archived on CTAN in `usergrps/uktug`.

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I Editorial

1 So farewell then

This will be, unless lightning strikes twice, my last edition of *Baskerville*. I took over the job as an emergency measure from an over-loaded Sue Brooks during the summer of 1993, shortly before the shattering event of the TUG conference at Aston University (I cannot be the only member of the committee for that meeting who has never fully recovered!). It turned out to be moderately easy, I thought, to cobble up an issue of fun material, but the crucial change in *Baskerville* was due to Rosemary Bailey, who insisted at a UKTUG committee meeting that we needed a bi-monthly, *regular*, newsletter, come hell or high water. She is one of the true parents of *Baskerville* as you see it; another is the redoubtable Malcolm Clark, who effectively diverted the energy he had devoted to the great TEXline into *Baskerville*; the third is Robin Fairbairns, who has actually consisently turned files into paper. My thanks to them, and everyone else who has beavered away over the last two years on *Baskerville*, and my best wishes to whoever gets the hot seat. You will not find this out until 1996, as the final issue of 1995 will be a revised *Frequently Asked Questions*.

At the 1995 TEX Users Group meeting, all delegates were given reprints of *Baskerville* 4.6; towards the end of the meeting, Don Knuth himself came to Robin Fairbairns and myself to ask for a subscription to the newsletter. That was when it all seemed worthwhile . . .

2 Overload

Any editor of a publication about TEX meets the problems of conflicting macros more than most people; curiously enough, no issue of *Baskerville* has yet proved impossible to run in one go. But last time it came close; for Herman Haverkort's packages alone, it took me several hours to work out which packages to omit (like LaTEX color), and where to cheat. At the last moment, Rowley's article needed `amsmath`, which then fought with Bailey's work . . . The fact that LaTEX 2ε did not trivially permit me to load `amsmath` for the duration of one paper only (it used to be easy in the days of LaTEX209) is a cause of irritation. Recalling observations in recent *Baskerville* s about the direction LaTEX is taking, I take the opportunity to commend to UKTUG members a paper by Matt Swift on 'Modularity in LaTEX' which will appear in TUGboat 16.3 — whatever you think of his suggestions, it is way past time to stop relying on just hope and goodwill as methods of preventing macro clashes.

3 Where are the Gleanings?

Many readers of *Baskerville* have turned first in the last couple of years to Malcolm Clark's column for some witty, salacious or even sensible, remarks. One of the threads of those gleanings has been a consistent prodding of the international TEX Users Group to get its act together with the journal *TUGboat*, which has fallen badly behind schedule. The good news is that TUG has put in place a team to take production work off the shoulders of the over-worked Barbara Beeton, and let her concentrate on real editing; it is also extending the scheme of guest editors for whole issues, which is where the *Gleanings* come in. Poacher Malcolm has turned gamekeeper / editor, and is working to get out a special issue of *TUGboat* on SGML, electronic documents and so forth. Hence his lack of leisure to write us some gleanings this month — do not worry, I am sure they will return. *Baskerville* readers who are members of TUG can rest assured they their journal will be firmly back on schedule by Christmas.

4 Whatever is wrong with my LaTEX file?

For the last twelve months I have been promising myself to write an article about debugging LaTEX files; this arose from some in-house training sessions I conducted at Elsevier about dealing with problematic authors' files. At last, here are my thoughts and recipes for dealing with stubborn files that you inherit from other people.

4.1   Golden rules

If you do not take the following precautions, you might as well give up now:

1. *Look* at TEX errors; those messages flashing across the screen are not some kind of screen saver.
2. Read the log file too; did you realize it has extra information? Specifically, it will list characters missing from a font.
3. Lay out the source sensibly; how can you find errors if your input is one long line of mixed macros and text?
4. Use syntax checkers; there are many of these: I use *lacheck*, from the authors of Emacs AUCTEX, and the one built into Eddi4TEX, but there are others. For LATEX especially, it is a god send to have the missing \end{enumerate} spotted for you.
5. LATEX has several packages to help show you what it is working with: showkeys shows you the labels you define; syntonly will run a LATEX file fast, ignoring fancy typesetting; the listfiles command lists the macro files that were used at the end (handy for checking versions), and the draft option will show overfull boxes and all manner of other things for some packages.
6. If you are a confident macro programmer, be aware of the many TEX primitives that can help you: set \errorcontextlines to give more context for help messages, use \message to put in diagnostic messages, try \meaning to find out what a macro really *is* defined as, rather that what you assumed it was. Don't despair at the amount of verbiage \tracingall gives you — there is gold in them thar log files.
7. Remember primitive programmer's debugging techniques; if all else fails in your quest to see why LATEX dies with that weird error in your 10000 line file, move \end{document} gradually back up the file from the end until it *does* work, and then stare at the 10 lines which you know provoke the error, with a wet towel around your head. It is faster than reading all 10000 lines over and over again hopelessly . . .
8. *Do not* mail the LATEX development team, or other package authors, every time TEX gives you an error prompt; you'll irritate hard-pressed volunteers working in their spare time. If you wait until you have a *good*, well-documented, repeatable, error condition that your friends get too, *then* you can report it, and likely get a friendly reply and a fix.

4.2   Examples

Firstly, did you think I was joking about laying out your text in a readable fashion? Can you easily find the error in this?

```
1   \begin
2   {document}\baselineskip=12pt\newcommand
3   {\F}{Fig.~}\newcommand {\w}{\omega
4   }\newcommand {\k}{\xi }\newcommand
5   {\p}{\phi
6   }\maketitle\thispagestyle{empty}\centerline
7   {\bf \underline{Abstract}}\vskip
8   6ptA probabilisticoptimal design
9   methodology for complex structures
10  using the existing probabilistic
11  optimization techniques.  \vskip
12  12pt\centerline{\bf
13  \underline{Nomenclature}\vskip 6pt
14  \begin{tabbing}\( A
15  \)\hspace{0.45in} \=:
16  Transformation matrix\\\( a_i \)
17  \>: Gradient of performance
18  function with respect \\$\hskip
19  1.25in$ to $i^{th}$ random variable
20  \\\( b \) \>: Design variable
21  vector\\\( {\it CDF} \) \>:
22  Cumulative distribution
23  function\\\( {\it COV} \) \>:
24  Coefficient of variation \\\( C_x
25  \) \>: Covariance
```

Common sense (and the LATEX manual) will also suggest that replacing code like:

```
\vskip 3pt\noindent{\bf \underline{Safety
Index Interpolation}}\vskip 1pt
```

with

```
\section{Safety Index Interpolation}
```

will considerably aid readability and maintenance.

Next, an example where the puzzling output is all explained in the log file:

```
1  {This is not so bad,
2  \bfseries\ttfamily hello?}
3  {This is not so bad, \scshape
4  Hello \bfseries Goodbye?}
5  {\it\bf\Large byebye}
6  \end{document}
```

Why do we not see bold typewriter or bold small caps? Because the fonts do not exist, and LaTeX tells us it has had to make substitutions as best it can:

```
LaTeX Font Warning: Font shape 'OT1/cmtt/bx/n'
 in size <10> not available
(Font)                Font shape 'OT1/cmtt/m/n'
 tried instead on input line 4.

LaTeX Font Warning: Font shape 'OT1/cmr/bx/sc '
 undefined
(Font)                using 'OT1/cmr/bx/n'
 instead on input line 6.
```

What more could you ask?

If hyphenation is your bugbear, do you understand the difference between the following large heavy animals?

```
1   rhinoceroses
2   \showhyphens{rhinoceroses}
3   \hyphenation{rh-ino-cer-os-es}
4   rhinoceroses
5   \begin{sloppypar}
6   rhinoceroses
7   \end{sloppypar}
8   rh\"inoceroses
9   \fontencoding{T1}\selectfont
10  rh\"inoceroses
11  \par\hskip\z@skip
12  rhinoceroses
```

Remember that:

1. TeX may need help hyphenating the word; give it clues;
2. If you want justification at all costs, set the right parameters — `sloppypar` does a sledgehammer and nut job, but it works;
3. If you put accents in words, hyphenation dies …
4. … unless you use T1 encoding, which cleverly transforms `\"i` to an 8-bit character internally so that TeX proceeds happily (ah, but you need 8-bit hyphenation patterns to do a proper job);
5. The first word of a paragraph will not hyphenate. Insert something harmless to bypass this law.

I expect you have all done this at some time:

```
1   \begin{figure}
2   \label{fig1}
3   \caption{This is a caption}
4   \end{figure}
```

and wondered why the labels are wrong? It is *not* the figure environment which sets labels, but the `\caption` command; what the example above will do is set the label 'fig1' to the value of the most recent section, equation, list item or whatever.

Do the new LaTeX2e packages puzzle you? Why doesn't this work:

```
1   \usepackage{graphicx}
2   \begin{document}
3   This is \rotatebox{75}{hello sunshine} at an angle
4   \end{document}
```

Simply because rotation, colour, scaling, and graphics insertion are all device dependent, and LaTeX needs to know what dvi driver you have. You probably meant something like:

```
\usepackage[dvips]{graphicx}
```

Now let us look at a bad file which is quite easy to understand:

```
1  \documentclass{article}
2  something
3  \begin{document}
4  hello \( a=
5  \end{documen
```

LaTeX says of this, quite understandably:

```
! Missing $ inserted.
<inserted text>
                  $
l.4

?
)
Runaway argument?
{documen
! File ended while scanning use of \end.
<inserted text>
                  \par
<*> bad

?
```

though the 'missing $' is a bit confusing when what it meant was 'missing \)'. *lacheck* does a much better job:

```
"bad.tex", line 5: <- unmatched "\end{documen}"
"bad.tex", line 3: -> unmatched "math begin \("
"bad.tex", line 5: <- unmatched "end of file bad.tex"
"bad.tex", line 2: -> unmatched "\begin{document}"
```

However, it sees nothing wrong with

```
1  \documentclass{article}
2  \begin{document}
3  Funnies: \dag, \AA and \"
4  \section{Introduction}
5  \end{document}
```

about which LaTeX says:

```
! Argument of \@xdblarg has an extra }.
<inserted text>
                  \par
<to be read again>
                     }
l.5 \section
           {Introduction}
?
```

Make of that one what you will! How long did it take you to spot the error? Can someone suggest a technique other than towel-round-the-head staring to catch it?

Lastly, did your TeX just say 'bufsize exceeded'? Maybe the file it was reading came from a Mac? or a word-processor which stored each paragraph as a single long line? If it is a graphic file, it may have come from a Mac package, and TeX is throwing up while searching for a `%%BoundingBox` line. You should realize that DOS, Unix and Mac treat line-endings differently! If you don't have a dedicated utility to fix this, try using *zip* to package up the files, and then *unzip* them, using the flag to convert text files to the local native format.

II Election for chair of UKTUG 1995–97

R. A. Bailey
Honorary Committee Secretrary 1991–95

I received 28 voting papers by the due date of 6/10/95. Of these, three were invalid because the voter had not put his or her name on the outside of the envelope. For the remaining 25, I checked that each voter was member of UKTUG and was voting no more than once. I then passed these 25 voting papers, in their unopened envelopes, to my colleague Professor B. A. F. Wehrfritz, who has no connection with UKTUG. He opened the envelopes and counted the votes. The votes were cast as follows:

Robin Fairbairns   20

Jonathan Fine   5

Therefore, Robin Fairbairns becomes Chair of the UKTUG from the end of the AGM on 18/10/95.

III   The Scenario: an Efficient Document with **hhparmrk**

Herman Haverkort & Frans Goddijn

Email: `herman@fgbbs.iaf.nl` & `goddijn@fgbbs.iaf.nl`

Summary

During work towards a flexible document as a continuous report on a wide variety of contacts for the Meridian Arts Ensemble in New York, Frans Goddijn felt the need to tag and mark certain paragraphs for specific groups of readers. Herman Haverkort wrote a package for LaTeX 2$_\varepsilon$, hhparmrk, which facilitates this by offering the possibility to set various signs next to paragraphs. This article presents hhparmrk, gives examples of its use and a short manual. For the hackers among us some of the TeXnical tricks involved behind the scenes are glanced at.

During the process of organizing concerts for a delightful brass quintet from New York called the Meridian Arts Ensemble I noticed that there is at least *one* aspect about playing all over the world which causes anxiety. Namely, the fact that in many places, many people (are supposed to) look after your interests and it's very hard to keep track of who is doing what.

I used my knowledge of LaTeX to generate reports on all my Meridian activities. Instead of building up a heap of separate emails, notes, letters and memos I wrote or compiled them all as `\sections` and `\subsections` into the same master document, which I entitled THE SCENARIO. With *CorelDraw!* I designed a title page, LaTeX took care of the table of contents and an elaborate index, and gradually I was generating a tight mass of information which I could print out at will and send to the Meridians.

This LaTeX product impressed them, as they'd never before seen such a 'roadmap' of all that was done or not yet done in their interest. This helped them in making the decision to leave a professional booking agent and let me coordinate all further activities in this part of the world! THE SCENARIO quickly grew in size to over fifty pages filled with valuable information about how to initiate contacts with promotors and presentors in concert halls and other venues. The advantage of using LaTeX over some other typesetting or word processing tools is that it's fast and simple to copy plain ASCII emails into it. For instance, the tuba player of the group uses the Internet to send me updates for the `tabular` listing their concert dates. The same goes for newspaper reviews and incoming faxes, which I run through a scanner with OCR to transfer it into electronic text. To brighten up the text page, I sometimes create a graphic scan of a hand written quote of musical score or a concert program.

Over the weeks, the book even got its own 'gossip' section, and soon it turned into a kind of family scrapbook, besides building up the more formal data.

By this time, the new print looked so handsome that it was a shame not to use it for a wider range of readers. Other groups could benefit from the many addresses listed in THE SCENARIO, and some fans had heard of its existence and were keen to get a copy of the book with all its *inside information*.

△ Just a demonstration of hhparmrk's way of bracing and footnoting a paragraph.

A stylized portrait of Frank Zappa. The Meridian Arts Ensemble is especially renowned for their interpretations of Zappa's compositions, arranged by Jon Nelson.

How to go about this? I would now need three versions of the document. One full version with all info for me and the Meridians, one slimmed down version where any explicitly confidential text would be left out and one minimal version especially geared towards concert hall programmers with only the basic material (introduction, biographical info, reviews and the like).

Luckily, I had just introduced a young man to LaTeX. I think that every TeX user has made attempts, with more or less success, to convince others of the beauty and pleasures of TeX and I am no exception to this rule. Most of the time, people have no clue what I'm talking about. Sometimes, one buys the 4allTeX CD-ROM and installs it but rarely an avid new user is born. This Herman Haverkort was different: my letter telling him about LaTeX happened to reach

him on a Friday when he was most bitterly sick of his 'WordPerfect' software and he immediately took action. He got the software from me, installed it, read the TEXbook from screen ignoring all *dangerous bend*-signs and the next week he devoured the printed book itself.

Herman recognized my problem and as he had a similar project at hand, he created a new style file for us, called hhparmrk.

Now I could brand some paragraphs for *exclusive* readership, others for a *circle* of interested readers and the rest was for *wide* distribution. In the 'Wide' version, paragraphs of the other two categories should vanish automatically (actually there is a fourth version, 'Concise', which is a 'Circle' version limited to the very basic information).

First, I took macros for the *disappearing acts* from the comment package but a little later I figured out an easier way, by using a macro with a variable and never using that variable! Here is the disappearing act:

```
\newcommand{\LeaveOut}[1]{}
```

\LeaveOut{Sh*! Wish I hadn't said that} enables me to put in some lengthy paragraphs that I don't (yet) intend to really use in print, but want to have there in the source file as my own private comments, or I can have TEX ignore portions of text I might want to use later.

In the 'Circle' version, only the *exclusive* texts must disappear and some more or less confidential paragraphs must be marked accordingly. In the 'Exclusive' version, everything is visible but the reader must be able to see what parts will be occluded for others.

Now look at the following new commands. At first they are without any use, later on they get their tasks assigned. Look at them, bland and expressionless like babies, with only their names to distinguish them from other creations …

```
\newcommand{\ForWhom}{}
\newcommand{\Circle}[1]{}
\newcommand{\Exclusive}[1]{}
\newcommand{\EndConcise}{}
```

This is what they get to do in life:

\ForWhom will remember for whom the current version is made.

\Circle will be a macro with one variable at a time, namely a paragraph that must be left out in the 'Wide' version and marked as 'Circle' in the other versions.

\Exclusive will also be a macro with one variable at a time, this time a paragraph that must be left out in the 'Wide' *and* in the 'Circle' versions and marked as 'Exclusive' in the 'Exclusive' version.

\EndConcise will normally mean nothing, but the command is placed at a point in the text where it must end with a new page and an index if I want to create a 'Concise' version.

Then the definitions of the different standard versions:

```
\newcommand{\ForExclusive}{
   \renewcommand{\ForWhom}{'Exclusive'}
   \renewcommand{\Exclusive}[1]{%
                   \MarkThisExclusive{##1}}
   \renewcommand{\Circle}[1]{%
                   \MarkThisCircle{##1}}
                   }
```

What happened above is that ForWhom will now remember it's for 'Exclusive' use, and both 'Exclusive' and 'Circle' paragraphs are classified as such in the margin.

```
\newcommand{\ForCircle}{
   \renewcommand{\ForWhom}{'Circle'}
   \renewcommand{\Exclusive}[1]{(\ldots)}
   \renewcommand{\Circle}[1]{%
                   \MarkThisCircle{##1}}
                   }
```

What happened above is that ForWhom will now remember it's for 'Circle' use. 'Exclusive' paragraphs are ignored and '(…)' is printed in their place, while 'Circle' paragraphs are classified as such in the margin.

```
\newcommand{\Concise}{
   \renewcommand{\EndConcise}{%
       \newpage \printindex \end{document}}
   \renewcommand{\ForWhom}{concise 'Circle'}
```

```
\renewcommand{\Exclusive}[1]{(\ldots)}
\renewcommand{\Circle}[1]{%
                    \MarkThisCircle{##1}}
                    }
```

What happened above is that `ForWhom` will now remember it's for 'concise Circle' use. 'Exclusive' paragraphs are ignored and '(...)' is printed in their place, while 'Circle' paragraphs are classified as such in the margin. Furthermore, at the place where the 'dummy' macro `\EndConcise` was loitering, it is now told to end the document neatly with a new page and an index.

```
\newcommand{\ForWide}{
   \renewcommand{\ForWhom}{'Wide'}
   \renewcommand{\Exclusive}[1]{(\ldots)}
   \renewcommand{\Circle}[1]{(\ldots)}
                    }
```

The long dull version. Only harmless material is printed, and lots of it, even beyond the `\EndConcise` macro.

```
\newcommand{\MarkThisExclusive}[1]{%
  \begin{trafficsigned*}{\trapbox:}{\small Ex}
    #1\end{trafficsigned*}}
\newcommand{\MarkThisCircle}[1]{%
  \begin{trafficsigned*}{\ringbox:}{\small Ci}
    #1\end{trafficsigned*}}
```

The above two lines control all markings in the text, using new macros and environments which are defined in hhparmrk.

```
This text may be seen by everybody.

\Circle{This text may be seen, marked with a
        circled 'Ci', by a certain circle.}

\Exclusive{This text may only be seen, marked
        with a 'Ex' in a trapezoid box, by a
        small group of readers exclusively.}
```

I am now able to change the look and size of the document by activating one of the following commands (while commenting out the others):

```
%\ForExclusive
%\ForCircle
%\ForWide
\Concise
```

Herman Haverkort will, later on in this article, explain the new and hitherto unknown commands here. I'm glad he does. They fill me with wonder. I began creating the macros only after looking hard and intensely into the manual material ...   and immediately after I'd finished writing them, I stacked them away in a separate style file . That way I don't have to see them so often and I can try to forget they're there at all!

Now I will first show you one of the first pages, where I explain to the readers what versions there are and what version they're holding. Next, I will try my luck at displaying the result for you ...

```
\ForExclusive

\noindent{This \textsc{scenario} comes in
three different prints, stemming from the same
source file: an abridged 'Wide' version for
presentors and other people who are involved
with the Meridian Arts Ensemble, a more
complete 'Circle' version for some people who
work together with the Ensemble and a full
'Exclusive' version with some private details
that are only useful for communication
```

```
between the members of the Ensemble and the
Meridian Foundation.

% reserve sign for HH's address, using macros
% defined in hhmuf.sty:
\mufhire emailhh:{herman@fgbbs.iaf.nl}

\MarkThisExclusive{This is an example of the
'roadsign' used in the margin of text parts
which are only visible in the 'Exclusive'
version. It was designed for us by Herman
Haverkort\muf emailhh:{}, a grand \textsc{mae}
fan and \TeX\ wizard. Texts marked in this
manner are represented as '(\ldots)' in the
'Circle' and 'Wide' printings.}

\MarkThisCircle{This is an example of the
'roadsign' used in the margin of text parts
which are only visible in the 'Circle' and
'Exclusive' version. It was designed for us
by Herman Haverkort\muf emailhh:{}, a grand
\textsc{mae} fan and \TeX\ wizard. Texts
marked in this manner are represented as
'(\ldots)' in the 'Wide' printing.}

Furthermore, a concise version of this
scenario consists of only the first sections,
as an introduction to presentors.

\textbf{NOTE: this is a print of the \ForWhom\
version.}}
```

which results in:

This SCENARIO comes in three different prints, stemming from the same source file: an abridged 'Wide' version for presentors and other people who are involved with the Meridian Arts Ensemble, a more complete 'Circle' version for some people who work together with the Ensemble and a full 'Exclusive' version with some private details that are only useful for communication between the members of the Ensemble and the Meridian Foundation.

Ex — This is an example of the 'roadsign' used in the margin of text parts which are only visible in the 'Exclusive' version. It was designed for us by Herman Haverkort,[⊖] a grand MAE fan and TeX wizard. Texts marked in this manner are represented as '(...)' in the 'Circle' and 'Wide' printings.

Ci — This is an example of the 'roadsign' used in the margin of text parts which are only visible in the 'Circle' and 'Exclusive' version. It was designed for us by Herman Haverkort,[⊖] a grand MAE fan and TeX wizard. Texts marked in this manner are represented as '(...)' in the 'Wide' printing.

Furthermore, a concise version of this scenario consists of only the first sections, as an introduction to presentors.
NOTE: this is a print of the 'Exclusive' version.

The hhparmrk kernel consists of the environments bracespanned and markspanned, which I will present now, starting with bracespanned.

⊖ herman@fgbbs.iaf.nl

1 `bracespanned`

$$\text{FG} \left\{ \begin{array}{l} \text{The environment } \texttt{bracespanned} \text{ can be used to set paragraphs braced like this one. This paragraph is done with:} \end{array} \right.$$

The environment `bracespanned` can be used to set paragraphs braced like this one. This paragraph is done with:

```
\begin{bracespanned}%
({\{}:-{FG}(){\}}:-{HH})
  The environment
  ... concluded by:
  demonstrated here.
\end{bracespanned}
```

The nasty details which determine the way of bracing are all specified just after `\begin{bracespanned}`; the concluding `\end{bracespanned}` is always as straightforward as demonstrated here.

HH

You might suspect that the left brace and comment ("FG" in the above example) are specified between left parentheses, while the right brace and comment are specified between right parentheses. Well, that is right. You do not have to specify both left and right stuff: you may leave one of them out, as in some of the examples below. The following paragraphs will all start with a box containing its bracing specification, that is: all that appears between `\begin{bracespanned}` and the text of the paragraph.

```
){\}}:-{\muf:{Just an example}})
```

Instead of the comments "FG" and "HH" in the above example, you can of course specify whatever you want for a comment, for example a footnote. This paragraph provides an example using the `\muf` footnote macro, which is defined in the hhmuf package.[♠] If you want to use standard footnotes, note that all that is spanned by `bracespanned` and the comments are so-called forbidden environments. To set a footnote you would have to use `\footnotemark` and `\footnotetext`; just using `\footnote` would not work.

} ♣

```
){(}:-{})
```

This paragraph illustrates that any extendable mathematical delimiter symbols can be used instead of braces, even symbols which are pointing the 'wrong' way. Just replace the `{\{}` or `{\}}` in the example above by `{(}`, as in this example, or whatever symbol you like.

(

```
){\}}:{65pt}{This... friends})
```
The `:-` in the examples above specifies the width of the spanning symbol plus comment. `:-` stands for the natural width of the symbol with comment, which usually satisfies. Another possible width specification is a colon followed by a braced dimension, like `:{65pt}`. Such a specification fixes the width of the symbol plus comment, thus enabling multi-line comments, like demonstrated here.

$$\left. \begin{array}{l} \text{This may be} \\ \text{read by fiends} \\ \text{and friends} \end{array} \right.$$

=\dimen157=\dimen157.

♣ Just an example
♠ See the article about HH getting carried away, published in *Baskerville* 5.4

ex. i

2 TEXnical Details

I will not present the definition of `bracespanned` here: it is too long and complicated. There is lots of fuss in it, caused by the need or wish to parse a lot of obligatory and optional arguments which determine the exact way of bracing. However, I would like to lift a corner of the veil which covers `bracespanned`, to give hackers some idea of what is going on behind the scenes. Maybe, if I am lucky, there is some hacker out there who will be highly amazed by unnecessary complexity in my approach, and will offer me a simpler approach instead.

2.1 Fooling TEX's Gluing

My first try to build a useful `bracespanned` environment or macro consisted of straightforward use of a mathematical display. It is not difficult to set a brace spanning a box with multiple lines of text in a mathematical display environment. Alas that did not work out properly in all cases. When `bracespanned` text was surrounded immediately by normal text, the interline skip between the top spanned line and the first unspanned line above was too small, as was the distance between the bottom spanned line and the first unspanned line below. TEX considered the whole mathematical display to be one unusually high line of text. Therefore TEX did its very best to squeeze the display in at the place of one normal text line, although the display actually contained several lines.

So I decided that I had to fool TEX a bit. I constructed a mathematical display as before, but now I boxed it. Then I typeset the spanned text again behind the scenes, now using `\vtop`, to determine the height of the first line. I then shifted down the boxed display to make it have that same height. Finally I typeset the spanned text a third time behind the scenes, now using `\vbox`, to determine the depth of the last line of spanned text. Then I would insert the display, which had the height of its first line of text, and fool TEX by setting `\prevdepth` to the depth of the last line. TEX still considered the display to be a single high line, but I made TEX 'think', with respect to setting interline glue, that the display had the height of its top line and the depth of its bottom line, as if all lines in between were not there.

The approach described above had a major disadvantage: the spanned text was typeset three times. This was not only inefficient; it was also error-prone. For example: if a counter was stepped in the spanned text, then it was stepped three times. I solved this by boxing the spanned text once, using `\vtop`. Then I made a centred copy of the resulting box, a `\vphantom` of which I used to set the braces in mathematical displays. I shifted the displays down to make them have the same height as the `\vtop`ed text, so that I could put the displays and the `\vtop`ed text together. Finally I made a copy of the `\vtop`ed text, which I unboxed to get its last line with `\lastbox` so that I could examine its depth. Then the remaining part of the procedure was like described in the previous paragraph.

All this resulted in the TEX code below (shown here abridged and simplified):

```
 %Box what has to be spanned in \@tempboxa:
\setbox\@tempboxa\vtop{#1}%
 %Make a centred copy of the result:
\sbox\@tempboxd{\ensuremath{\vcenter{%
   \copy\@tempboxa}}}%
 %Determine how much the displays should be
 %shifted down; store result in \@tempdima:
\setlength\@tempdima{\ht\@tempboxd}%
\addtolength\@tempdima{-\ht\@tempboxa}%
 %Set the left brace in \@tempboxb:
\sbox\@tempboxb{%
 \lower\@tempdima\hbox{%
 %...
 %in hhparmrk.sty one finds at this place
 %the math display stuff which sets the left
 %brace, using \vphantom{\copy\@tempboxd} to
 %determine the height
 %...}}%
 %Set the right brace in \@tempboxc:
\sbox\@tempboxc{%
 %...
```

```
%same story
%...}%
%Now determine the depth of the last line:
%Make a discardable copy of \@tempboxa in
%\@discabox:
\setbox\@discabox\copy\@tempboxa
\setbox\@discabox\vbox{%
%Get the last line:
\unvbox\@discabox
\setbox\@discabox\lastbox
%Save its depth in \h@virtualdepth:
\global\h@virtualdepth\dp\@discabox}%
%Finally put it all together:
\hbox{\llap{\box\@tempboxb}%
\box\@tempboxa\rlap{\box\@tempboxc}}%
%Fool TeX's gluing:
\prevdepth\h@virtualdepth
```

2.2   Banishing Stubborn White Space

Some environments like to surround themselves by vertical white space. Section headings have the same tendency. But when complete (sub)sections are spanned by `bracespanned`, we do not want to get results like this:

Heading

lots of blah …

It looks ugly. Vertical space added in the beginning of a spanned passage should be squeezed out: it should be set on top of the span, instead of *in* the span. This is implemented as follows. In the beginning of a passage being boxed `\prevdepth` is set to -4774pt (just some value smaller than -1000pt. `\addvspace` is redefined to set vertical space only when `\prevdepth` is greater than -4774pt, that is: when we are not in the beginning of the spanned passage anymore. If `\prevdepth` still equals -4774pt then the vertical space is added to a box register which holds the squeezed out space. After the complete passage has been boxed, first the squeezed out space register is unboxed and added to the main vertical list, and then the boxed passage is spanned and set. This results in the following TeX code for setting brace spans:

```
%Box what has to be spanned in \@tempboxa:
\setbox\@tempboxa\vtop{\topsqueezeout #1}%
%Make a centred copy etc. (see the previous
%listing)
%...
%Finally put it all together:
\topsqueezein
\hbox{\llap{\box\@tempboxb}%
\box\@tempboxa\rlap{\box\@tempboxc}}%
%Fool TeX's gluing:
\prevdepth\h@virtualdepth
```

where `\topsqueezeout` takes care of redefining `\addvspace`, and `\topsqueezein` adds the accumulated squeezed out space:

```
\newbox\h@tsqo@squeeze

\def\topsqueezeout{%
  % Save original \addvspace:
  \let\h@tsqo@addvspace=\addvspace
  % Redefine \addvspace:
  \def\addvspace##1{%
    \ifdim\prevdepth>-4774pt\relax
      % If we are not in the beginning of the
```

```
      % box anymore, call original \addvspace:
      \h@tsqo@addvspace{##1}%
    \else
      % else add space to box register which
      % holds the squeezed out space:
      \global\setbox\h@tsqo@squeeze\vbox{%
       \unvbox\h@tsqo@squeeze
       \h@tsqo@addvspace{##1}}
    \fi}%
  % Initialize box holding squeezed out space:
  \global\setbox\h@tsqo@squeeze\vbox{}%
  % Set \prevdepth to -4774pt to indicate the
  % beginning of the box:
  \setlength\prevdepth{-4774pt}}
```

```
\def\topsqueezein{\unvbox\h@tsqo@squeeze}
```

The real implementation in hhparmrk is more complex: it also redefines `\addpenalty`, and it contains more fuss to account for nested `bracespanned` environments.

At the bottom of the spanned passage vertical space should be squeezed out as well. This is also done using a box register to hold the squeezed out space. After the passage being boxed has been entirely added to the box in which it is set, the space at the end is examined with `\lastskip`. The space is removed with `\unskip` and added to the box holding squeezed out space. Because there may be multiple skips at the end of the passage this procedure is repeated until `\lastskip` returned zero three times. I could not find a way to distinguish zero skips and no skips: `\lastskip` returns zero in both cases. Since three consecutive zero skips seem to be unlikely, the algorithm terminates when `\lastskip` yielded zero three times consecutively.

2.3 hhparmrk: *Parallel Marks?*

hhparmrk actually stands for: *Herman Haverkort's parallel marks*. The 'philosophy' behind this is that hhparmrk's marks should not interfere with the hierarchical structure of the document. Ideally marked and unmarked passages are typeset and processed just like they normally are, except for the presence of the marks.

In practice this is not fully attainable. First it is probably inevitable to set each marked passage as a separate paragraph, and that is what is done indeed.

A second problem is that marked passages are set in internal vertical mode, which causes footnotes and marginal notes to disappear. For hhmuf's style♠ footnotes this problem has been solved. For standard footnotes this problem can be solved, but I did not bother to do it yet.

A third problem is the grouping invoked by using environments and boxing commands. This grouping causes the scope of local assignments in marked passages to be reduced. Because that is exactly what is expected when LaTeX's environments are used I decided not to do much about it, to avoid confusion. However, I built in a small 'scope correction' which suppresses the scope reduction of assignments to `\everypar`, `\par`, `\@par` and `\@currentlabel`. The first three should not be really necessary, but the handling of `\@currentlabel` can be useful when section headings or the like are spanned for some reason. The scope correction can be activated by the macro `\scopecorrection`, which is defined as follows:

```
\def\scopecorrection{%
  \h@savelocals
  \h@restorelocals}
```

```
\def\h@savelocals{%
  \global\h@sc@everypar=\everypar
  \global\let\h@sc@par=\par
  \global\let\h@sc@@par=\@par
  \global\let\h@sc@@currentlabel=
                          \@currentlabel}
```

```
\def\h@restorelocals{%
```

```
  \aftergroup\h@@restorelocals}
\def\h@@restorelocals{%
  \everypar=\h@sc@everypar
  \let\par=\h@sc@par
  \let\@par=\h@sc@@par
  \let\@currentlabel=\h@sc@@currentlabel}
```

3   Where to Get what Files?

To be able to use hhparmrk, you should also have the packages hhflxbox, hhunits, hhqueue and hhutils0 available. These packages are automatically loaded by hhparmrk. All files needed can be obtained from FGBBS$^{\times}$ by requesting the file hh.arj. They are on CTAN in macros/latex/contrib/supported/hh. Note that LaTeX2.09 versions are not available.

IV   The European Computer Modern Fonts, release 1.2

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1   Introduction

In 1990 at the TUG meeting at Cork, Ireland, the european TeX user groups agreed on a 256 character encoding supporting many european languages with latin writing. This encoding is both an *internal encoding* for TeX and a *font encoding*. This double nature is a consequence of the fact that the two kind of encodings cannot be entirely separated within TeX.

The design goals of the Cork encoding are to allow as many languages as possible to be hyphenated correctly and to guarantee correct kerning for those languages. Therefore it includes many ready-made accented letters.

It also includes some innovative features, which have not become very popular yet, though they deserve to become so. First to mention is a special, zero width invisible character, the compound word mark (cwm). The second is the separation of the two characters <hyphen> and <hyphenchar>. By appropriate design of the hyphenchar glyph, hanging hyphenation can be achieved.

The final version of the Cork encoded fonts will be called ec (European Computer Modern or Extended Computer Modern) fonts. The current version, called dc fonts, is an intermediate step towards the final version. Note, that in the cause of bug fixes and improvements, the metrics may change.

The need for a text companion font was first articulated in the discussion of new 256 character mathematical fonts in 1993. In order to achieve a better orthogonality between text and math, some text symbols stored in the math fonts should be moved to the text companion fonts[1]. The text companion fonts are also the ideal place to store some new characters, like currency symbols.

2   Supported languages

The following languages are supported by the Cork encoding: Afrikaans, Albanian, Breton, Croat, Czech, Danish, Dutch, English, Estonian, Faroese, Finnish, French, Frisian, Gaelic, Galician, German, Greenlandic, Hungarian, Icelandic, Irish (modern orthography), Italian, Letzeburgish, Lusatian (Sorbian), Norwegian, Polish, Portuguese, Rhaetian (Rumantsch), Rumanian, Slovak, Slovene, Spanish, Swedish, Turkish. Many non-european languages using the standard latin alphabet (e. g. Bahasa Indonesia, Suaheli) are also supported.

In europe, the following languages aren't supported: Azeri, Basque, Catalan, Esperanto, Irish (old orthography), Latvian, Lithuanian, Maltese, Sami, Welsh. Of course, Greek and all languages with cyrillic writing are outside the scope of the Cork encoding.

3   Standard Control Sequences

The following standard control sequences are assigned with LaTeX's T1 encoding for the dc fonts:

\r Ring accent (\r u gives ů)

\k Ogonek (\k e gives ę)

\dh, \DH Icelandic letter edh (ð, Ð)

\dj, \DJ Letter d with stroke (đ, Ð)

\ng, \NG Letter eng (ŋ, Ŋ)

\th, \TH Icelandic letter thorn (ᵗʰ, Þ).

The control sequences for the tc font symbols aren't fixed yet.

---

[1] The archives of the math-font-discuss mailing list are available for ftp on `ftp.cogs.susx.ac.uk` in directory `pub/tex/mathfont`.

4   Ligatures

In the proportional fonts, the following ligatures are implemented:

```
--    – (en dash)
---  — (em dash)
``    " (english opening quotes, german closing quotes)
''    " (english and polish closing quotes)
,,    „ (german and polish opening quotes)
<<   « (french opening quotes)
>>   » (french closing quotes)
!`   ¡ (spanish opening exclamation mark)
?`   ¿ (spanish opening question mark)
fi   fi
ff   ff
fl   fl
ffi  ffi
ffl  ffl
```

In the typewriter fonts, the following ligatures are implemented:

```
--   (en dash)
---  (em dash)
``    (english opening quotes, german closing quotes)
''    (english and polish closing quotes)
,,    (german and polish opening quotes)
<<   (french opening quotes)
>>   (french closing quotes)
!`   (spanish opening exclamation mark)
?`   (spanish opening question mark)
```

The convention on the dashes suites British usage for number range dashes best and does not interfere with any other known usage. In verbatim mode, all ligatures are switched off.

5   Hints on usage

The dc fonts are intended for text usage in european languages. The Cork font encoding is selected with the command \usepackage[T1]{fontenc} in LATEX 2ε.

The tc fonts are a multi-purpose font. Suggested usages include verbatim setting of latin-1 and latin-2 listings, avoiding the so-called "hidden math" in text mode (that's the reason why there are footnote symbols in), providing building blocks for virtual fonts (oldstyle digits are included for this reason), or just providing otherwise unavailable symbols (like the permille sign).

Some characters are in for verbatim listings only, they should *not* be used in plain text—they are better replaced with macros. These characters include the raised digits, the fractions, the trademark sign, and the ordinal indicators.

For text fractions, the following macro is suggested (from the TEXbook, exercise 11.6):

```
\newcommand{\nicefrac}[2]{\leavevmode\kern.1em
\raise.5ex\hbox{\the\scriptfont0 #1}\kern-.1em
/\kern-.15em\lower.25ex
\hbox{\the\scriptfont0 #2}}
```

It can produce arbitrary fractions and is not restricted to some simple cases, the output looks $\frac{1}{2}$, $\frac{5}{4}$, $\frac{17}{42}$.

For the ordinal indicators (º and ª), the following macros are suggested (from spanish.ldf, babel bundle):

```
\newcommand{\ordmale}{%
 \raise1ex\hbox{\underbar{\scriptsize o}}%
}
\newcommand{\ordfemale}{%
 \raise1ex\hbox{\underbar{\scriptsize a}}%
}
```

6 Naming of the font files

Currently, the extended computer modern fonts have the prefix dc. This prefix will change to ec with the final release after another round of bug fixing. I hope to make the transition from dc to ec in about one year. The text companion fonts have the prefix tc, which is not subject to change. However, later releases may included more characters and therefore have different checksums. No characters shall be removed from the tc fonts.

Most of the dc fonts can be generated at any size one wants in the range from 5pt to 100pt. For each size, a unique name is needed.

With the release 1.2 of the dc fonts, a new, more precise naming scheme is in effect. Since there are widely used operating sytems limiting the file name to 8 character (plus an extension of 3 characters) the following scheme is used:

- The first two letters (either dc or tc denote the encoding and the general design of the font.
- The one or two following letters denotes the family, shape, and series attributes of the font. E. g. r for roman, bx for bold extended, it for italic, ot bi for bold extended italic. A complete overview is given at the end of this section.
- The following four digits give the design size in TeX's points multiplied with 100. E. g. 1000 denotes ten point, 1440 denotes magstep 2, i. e. 14.4 point, and 0500 denotes five point.

Here are the implemented styles:

Roman family: r roman, b bold, bx bold extended, sl slanted, bl bold extended slanted, cc caps and small caps, ti (text) italic, bi bold extended italic, u unslanted italic, ci classical serif italic (new design).

Sans serif family: ss sans serif, si sans serif inclined (slanted), sx sans serif bold extended, so sans serif bold extended oblique (slanted).

Typewriter family: tt typewriter, tc typewriter caps and small caps, st slanted typewriter, it italic typewriter, vt variable width typewriter.

Various other fonts: bm variant bold roman, dh dunhill, fb Fibonacci parameters, ff funny, fi funny italic. Expect errors with the funny fonts, they aren't really worked out.

Here are some examples:

dcr1000	European computer modern roman at 10pt
tcr1000	Text companion symbols roman at 10pt
dcss1728	European computer modern sans serif at 17.28pt
dcbx0900	European computer modern roman bold extended at 9pt

Some remaining fonts come at one size only, those are

dcssdc10	sans serif demi-bold condensed
dcsq8	sans serif quotation
dcqi8	sans serif quotation inclined
dclq8	latex sans serif quotation
dcli8	latex sans serif quotation inclined
idclq8	invisible latex sans serif quotation
idcli8	invisible latex sans serif quotation inclined.

The last four fonts are for the slides document class, which replaces old SLITEX. They contain a special version of the capital letter 'I'.

7 The Cork Encoding

position glyph description
(octal)

Accents for lowercase letters

000	`	grave
001	´	acute
002	^	circumflex
003	~	tilde

004	¨	umlaut
005	˝	hungarian
006	˚	ring
007	ˇ	hachek
010	˘	breve
011	¯	macron
012	˙	dot above
013	¸	cedilla
014	˛	ogonek

Miscellaneous

015	‚	single base quote
016	‹	single opening guillemet
017	›	single closing guillemet
020	"	english opening quotes
021	"	english closing quotes
022	„	base quotes
023	«	opening guillemets
024	»	closing guillemets
025	–	en dash
026	—	em dash
027		compound word mark (invisible)
030	‰	perthousandzero
031	ı	dotless i
032	ȷ	dotless j
033	ﬀ	ligature ff
034	ﬁ	ligature fi
035	ﬂ	ligature fl
036	ﬃ	ligature ffi
037	ﬄ	ligature ffl
040	␣	visible space

ASCII

041	!	exclamation mark
042	"	straight quotes
043	#	hash mark
044	$	dollar sign
045	%	percent sign
046	&	ampersand
047	'	apostrophe
050	(	opening parentheses
051	)	closing parentheses
052	*	asterisk
053	+	plus sign
054	,	comma
055	-	hyphen (note: not minus sign)
056	.	full stop
057	/	solidus
060	0	digit 0
…		
071	9	digit 9
072	:	colon

073	;	semicolon
074	<	less than sign
075	=	equals sign
076	>	greater than sign
077	?	question mark
100	@	commercial at
101	A	capital letter A
…		
132	Z	capital letter Z
133	[	opening square bracket
134	\	backslash
135	]	closing square bracket
136	^	ASCII circumflex
137	_	underscore
140	'	opening quote (not ASCII grave!)
141	a	lowercase letter a
…		
172	z	lowercase letter z
173	{	opening curly brace
174	|	vertical bar
175	}	closing curly brace
176	~	ASCII tilde
177	-	hyphenchar (hanging)

Letters for eastern european languages (from latin-2)

200	Ă	capital letter A with breve
201	Ą	capital letter A with ogonek
202	Ć	capital letter C with acute
203	Č	capital letter C with hachek
204	Ď	capital letter D with hachek
205	Ě	capital letter E with hachek
206	Ę	capital letter E with ogonek
207	Ğ	capital letter G with breve
210	Ĺ	capital letter L with acute
211	Ľ	capital letter L with hachek
212	Ł	capital letter crossed L
213	Ń	capital letter N with acute
214	Ň	capital letter N with hachek
215	Ŋ	capital letter Eng
216	Ő	capital letter O with hungarian double acute
217	Ŕ	capital letter R with acute
220	Ř	capital letter R with hachek
221	Ś	capital letter S with acute
222	Š	capital letter S with hachek
223	Ş	capital letter S with cedilla
224	Ť	capital letter T with hachek
225	Ţ	capital letter T with cedilla
226	Ű	capital letter U with hungarian double acute
227	Ů	capital letter U with ring
230	Ÿ	capital letter Y with diaeresis
231	Ź	capital letter Z with acute
232	Ž	capital letter Z with hachek

233	Ż	capital letter Z with dot
234	IJ	capital letter IJ
235	İ	capital letter I with dot
236	đ	lowercase letter d with bar
237	§	section sign
240	ă	lowercase letter a with breve
241	ą	lowercase letter a with ogonek
242	ć	lowercase letter c with acute
243	č	lowercase letter c with hachek
244	ď	lowercase letter d with hachek
245	ě	lowercase letter e with hachek
246	ę	lowercase letter e with ogonek
247	ğ	lowercase letter g with breve
250	ĺ	lowercase letter l with acute
251	ľ	lowercase letter l with hachek
252	ł	lowercase letter crossed l
253	ń	lowercase letter n with acute
254	ň	lowercase letter n with hachek
255	ŋ	lowercase letter eng
256	ő	lowercase letter o with hungarian double acute
257	ŕ	lowercase letter r with acute
260	ř	lowercase letter r with hachek
261	ś	lowercase letter s with acute
262	š	lowercase letter s with hachek
263	ş	lowercase letter s with cedilla
264	ť	lowercase letter t with hachek
265	ţ	lowercase letter t with cedilla
266	ű	lowercase letter u with hungarain double acute
267	ů	lowercase letter u with ring
270	ÿ	lowercase letter y with diaeresis
271	ź	lowercase letter z with acute
272	ž	lowercase letter z with hachek
273	ż	lowercase letter z with dot
274	ij	lowercase letter ij
275	¡	spanish inverted exclamation mark
276	¿	spanish inverted question mark
277	£	pound sign

Letters for western european languages (from latin-1)

300	À	capital letter A with grave
301	Á	capital letter A with acute
302	Â	capital letter A with circumflex
303	Ã	capital letter A with tilde
304	Ä	capital letter A with diaeresis
305	Å	capital letter A with ring
306	Æ	capital letter AE
307	Ç	capital letter C with cedilla
310	È	capital letter E with grave
311	É	capital letter E with acute
312	Ê	capital letter E with circumflex
313	Ë	capital letter E with diaeresis
314	Ì	capital letter I with grave
315	Í	capital letter I with acute

316	Î	capital letter I with circumflex
317	Ï	capital letter I with diaeresis
320	Ð	capital letter Eth (D with bar)
321	Ñ	capital letter N with tilde
322	Ò	capital letter O with grave
323	Ó	capital letter O with acute
324	Ô	capital letter O with circumflex
325	Õ	capital letter O with tilde
326	Ö	capital letter O with diaeresis
327	Œ	capital letter OE
330	Ø	capital letter O with slash
331	Ù	capital letter U with grave
332	Ú	capital letter U with acute
333	Û	capital letter U with circumflex
334	Ü	capital letter U with diaeresis
335	Ý	capital letter Y with acute
336	Þ	capital letter Thorn
337	SS	capital letter Sharp S (deviating from latin-1)
340	à	lowercase letter a with grave
341	á	lowercase letter a with acute
342	â	lowercase letter a with circumflex
343	ã	lowercase letter a with tilde
344	ä	lowercase letter a with diaeresis
345	å	lowercase letter a with ring
346	æ	lowercase letter ae
347	ç	lowercase letter c with cedilla
350	è	lowercase letter e with grave
351	é	lowercase letter e with acute
352	ê	lowercase letter e with circumflex
353	ë	lowercase letter e with diaeresis
354	ì	lowercase letter i with grave
355	í	lowercase letter i with acute
356	î	lowercase letter i with circumflex
357	ï	lowercase letter i with diaeresis
360	ð	lowercase letter edh
361	ñ	lowercase letter n with tilde
362	ò	lowercase letter o with grave
363	ó	lowercase letter o with acute
364	ô	lowercase letter o with circumflex
365	õ	lowercase letter o with tilde
366	ö	lowercase letter o with diaeresis
367	œ	lowercase letter oe
370	ø	lowercase letter o with slash
371	ù	lowercase letter u with grave
372	ú	lowercase letter u with acute
373	û	lowercase letter u with circumflex
374	ü	lowercase letter u with diaeresis
375	ý	lowercase letter y with acute
376	þ	lowercase letter thorn
377	ß	lowercase letter sharp s (deviating from latin-1)

8 The Text Companion Encoding

position   glyph   description

(octal)

Accents for capital letters

000	`	grave
001	´	acute
002	^	circumflex
003	~	tilde
004	¨	umlaut
005	˝	hungarian
006	°	ring
007	ˇ	hachek
010	˘	breve
011	¯	macron
012	˙	dot above
013	¸	cedilla
014	˛	ogonek

Miscellaneous

015	‚	base single straight quote
022	„	base double straight quotes
025	–	twelve u dash
026	—	three quarters emdash
030	←	left pointing arrow
031	→	right pointing arrow
032	⌢	tie accent (lowercase)
033	⌢	tie accent (capital)
040	␢	blank symbol
044	$	dollar sign
047	'	straight quote
052	∗	centered star
057	/	fraction

Oldstyle digits

060	0	oldstyle digit 0
061	1	oldstyle digit 1
062	2	oldstyle digit 2
063	3	oldstyle digit 3
064	4	oldstyle digit 4
065	5	oldstyle digit 5
066	6	oldstyle digit 6
067	7	oldstyle digit 7
070	8	oldstyle digit 8
071	9	oldstyle digit 9

Miscellaneous

115	℧	mho sign
117	◯	big circle
127	Ω	ohm sign
136	↑	arrow up
137	↓	arrow down

140	`	backtick (ASCII grave)
142	⋆	born
144	†	died
154	⬮	leaf
155	∞	married
156	♪	musical note
176	~	low tilde
177	₌	short equals

TS1-symbols

200	˘	ASCII-style breve
201	ˇ	ASCII-style hachek
202	″	double tick (ASCII double acute)
203	‶	double backtick
204	†	dagger
205	‡	ddager
206	‖	double vert
207	‰	perthousand
210	•	bullet
211	°C	centigrade
212	$	dollaroldstyle
213	¢	centoldstyle
214	f	florin
215	₡	colon
216	₩	won
217	₦	naira
220	₲	guarani
221	₱	peso
222	£	lira
223	℞	recipe
224	‽	interrobang
225	⸮	gnaborretni
226	đ	dong sign
227	™	trademark

Symbols from ISO-8859-1 (latin-1)

242	¢	cent
243	£	sterling
244	¤	currency sign
245	¥	yen
246	¦	broken vertical bar
247	§	section sign
250	¨	high dieresis
251	©	copyright
252	ª	feminine ordinal indicator
254	¬	logical not
256	®	circled R
257	¯	macron
260	°	degree sign
261	±	plus-minus sign
262	²	superscript 2
263	³	superscript 3

264	´	tick (ASCII-style acute)
265	µ	micro sign
266	¶	pilcrow sign
267	·	centered dot
271	^{1}	superscript 1
272	$^{\underline{o}}$	masculine ordinal indicator
274	$\frac{1}{4}$	fraction one quarter
275	$\frac{1}{2}$	fraction one half
276	$\frac{3}{4}$	fraction three quarters
326	×	multiplication sign (times)
366	÷	division sign

Editor's note

Users of PostScript fonts (like *Baskerville*) will want to know how many of the Text Companion symbols are available to them. The following table shows those that can be easily derived from Monotype Baskerville, and its Expert set, with the corresponding PostScript names. Some others could be 'faked' in the virtual font; a LaTeX package which provides simple access to these symbols, and redefines existing macros to remove dependence on maths fonts, is under preparation by Sebastian Rahtz.

quotesinglbase	‚	quotedblbase	„	threequartersemdash	■	dollar	$
quotesingle	'	fraction	⁄	zerooldstyle	■	oneoldstyle	
twooldstyle	■	threeoldstyle		fouroldstyle	■	fiveoldstyle	
sixoldstyle	■	sevenoldstyle		eightoldstyle	■	nineoldstyle	
asciitilde	~	quotedbl	"	dagger	†	daggerdbl	‡
perthousand	%■	bullet	•	dollaroldstyle		centoldstyle	■
florin	ƒ	colonmonetary		trademark	™	cent	¢
sterling	£	currency	¤	yen	¥	brokenbar	¦
section	§	copyright	©	ordfeminine	ª	logicalnot	¬
registered	®	macron	¯	degree	°	plusminus	±
twosuperior	²	threesuperior	³	mu	µ	paragraph	¶
periodcentered	·	onesuperior	¹	ordmasculine	º	onequarter	¼
onehalf	½	threequarters	¾	multiply	×	divide	÷

V   Book review: The Printing Revolution in Early Modern Europe

Jonathan Fine

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The Printing Revolution in Early Modern Europe, Elizabeth L Eisenstein ISBN 0 521 44770 4 (paperback) £7.95, $11.95 300 + xiv pages Cambridge University Press (Canto imprint)

This book is an abridgement for the lay reader of a full scale work written for scholars, the result of a decade of study. It is that rare and valuable thing, a scholarly work accessible and interesting to the educated general reader.

The author *had long been dissatisfied with the prevailing explanations for the intellectual revolutions of early modern times*. She decided to investigate. (This review italicizes the author's words.) *What were some of the most important consequences of the shift from script to print? Anticipating a strenuous effort to master a large literature, I began to investigate what had been written on this obviously important subject. To my surprise, I did not find even a small literature available for consultation. No one had yet attempted to survey the consequences of the fifteenth century communications shift*.

In this century there has been a communications shift, which is still continuing, and whose consequences are likely to be as important and durable as that of the fifteenth century (from script to print). The telegraph was followed by the telephone, radio and then television. Electronic computers (built out of radio valves, telephone exchange parts and the like) were the next development. Magnetic recording technology (developed for voice and music) was adapted for use by computers, moving from tapes to cards, drums and discs. Telephone lines were used to transfer data and thus to link geographically remote computers. The latest in the technological revolution is the Internet or World Wide Web, CD-ROM, and the beginnings of what are called portable documents.

History is more than a sequence of Kings and Queens, or in our case a list of technological Aces and Jokers. This technology came from somewhere. Its creation appears to be influenced by political, economic and social forces. For example, Universities support Science. In our case, fundamental contributions of Faraday, Maxwell, Planck, Curie, Einstein, Rutherford, Heisenberg, Schrodinger, Bohr, Dirac and many others have laid the scientific basis for the present shift from paper to digital or electronic media.

From where then did science arise? Was Newton chance, and what effect did science and religion have on each other? How did what we may call early modern Europe emerge from late medieval society? Was it due to the Renaissance? Eisenstein's book is a carefully considered and well written discussion of the emergence of a human culture based on printed communication, that began in the late fifteenth century, and its influence on the humanities, on religion and on science. This print culture was something new, just as the film and television culture of today is new. Each has an effect on the human mind.

Before describing the text of this book, some comments about illustrations. They have been well chosen. There are about sixty illustrations, mostly pages from rare books, but sadly they are not indexed. They have reproduced well, and add greatly to the book. For Bibles, there is a page from the Gutenberg Bible compared to a contemporary hand-copied Bible, the so-called wicked Bible of 1631 (which misses the 'not' from the adultery commandment), and the frontpiece and beginning of Genesis from Christopher Plantin's great Antwerp Polyglot Bible of 1571. There is the title page of Galileo's final treatise (printed by the still flourishing Elsevier), and its appearance on the (printed) Vatican index of prohibited books. There are many other useful and illuminating illustrations, including an extract from a pattern book for tailors and dressmakers (Seville, 1588) which made the Spanish fashion "visible through the far-flung Hapsburg empire".

The quotations and incidental facts are also well chosen. Here are two such gems. The hazards of having a famous face are not new to this century. Eisenstein writes:

> The difference between the older repeatable image which was stamped on coins and the newer by-product of print is suggested by one of the more celebrated episodes of the Frech Revolution. The individual features of emperors and kings were not sufficiently detailed when stamped on coins for their faces to be recognized when they travelled incognito. But a portrait engraved on paper money enable an alert Frenchman to recognize and halt Louis XVI at Varennes.

while to open the Preface she quotes Joseph Ames (1749) who wrote:

I do ingenuously confess that in attempting this history of Printing I have undertaken a task much too great for my abilities the extent of which I did no so well perceive at first.

The book is divided into two parts. The first, *The emergence of print culture in the West*, can be thought of as an essay on the differences between the earlier scribal culture and the new print culture. Before print each book was a unique item, and each new copy would have new copyists errors. It rarely makes sense to talk of an edition of a hand-written book. Printed books come in editions, of hundreds or thousands or beyond. Each copy will be identical to each other, except that printers too can make errors.

Even without the commissioning of new works, the wider circulation of scribal texts is a significant change. For example *as a student at Cracow in the 1480s, the young Copernicus probably found it hard to get a look at a single copy of Ptolemy's* Almagest—*even in a corrupted medieval Latin form. Before he died, he had three different editions at hand. As a fourteen-year-old in Copenhagen in 1560, the young Tycho Brahe could purchase all of Ptolemy's work, including an improved translation of the full* Almagest *made from the Greek.*

Perhaps the most important consequence of the shift was the emergence of an expanding republic of letters. The reading public, their booksellers and printers, their authors and illustrators. *As the key figure around whom all arrangements revolved, the master printer himself bridged many worlds. He was responsible for obtaining money, supplies, and labor, while developing complex production schedules, coping with strikes, trying to estimate book markets and lining up learned assistants. He had to keep on good terms with officials, while cultivating talented authors and artists who might bring his firm profit or prestige. In those places where his enterprise prospered and he achieved a position of influence with fellow townsmen, his workshop became a veritable cultural centre attracting local literati and celebrated foreigners, providing both a meeting place and message centre for an expanding cosmopolitan Commonwealth of Learning.* Christopher Plantin, whose activities are briefly discussed, is an outstanding example of a master printer. *After settling in Antwerp and establishing ties with Leiden, Plantin decided to learn Dutch. Never one for wasted effort, he "placed in piles and in alphabetical order" each new word that he learned. Thus was launched a collaborative venture which resulted in […] the "first Dutch dictionary worth its name."* For more on Plantin's remarkable life and legacy, consult Colin Clair's biography.

The second part considers the *Interaction with other developments*. In it *possible relationships and connections are explored with the aim of providing a basis for some tentative conclusions concerning the effects of the communications shift upon three movements which seem strategic in the shaping of the modern mind.*

The first in the Renaissance, which has long been something of a challenge for historians to understand. Eisenstein suggests that it would be productive for historians to *direct attention to something that really did happen, that was obviously of crucial importance, that occurred in the second half of the fifteenth century and at no other time in the history of the West.* This is of course the shift to print culture. Later she writes *early humanists, from Petrarch to Valla, owe their still vital reputation as culture heroes to the prosaic print-made knowledge industry. […] Earlier scholars had been less fortunate.*

The second is *Western Christendom disrupted*. Protestantism was *the first movement of any kind, religious or secular, to use the new presses for overt propaganda and agitation against an established institution. By pamphleteering directed at arousing popular support and aimed at readers who were unversed in Latin, the reformers unwittingly pioneered as revolutionaries and rabble rousers.* Between 1517 and 1520, we are told, Luther's thirty publications sold well over 300,000 copies. Even by modern standards this is a considerable achievement.

This book was originally written as a contribution to historical debate. Its main thesis is the effect of print as an agent of social change has been ignored or underestimated. "One of the mysteries of Reformation history [is] how this proposal for academic disputation [Luther's theses], written in Latin, could have kindled such enthusiastic support and thereby have such far-reaching impact", wrote one modern scholar. To dispel this mystery, Eisenstein suggests that we should *instead of jumping directly from church door to public clamor, move more cautiously, a step at a time, looking at the activities of printers, translators, and distributors who acted as agents of change. Probably we ought to pause with particular care over the interval in December 1517 when three separate editions were printed almost simultaneously by printers located in three separate towns.*

On the whole, the author concludes, *it seems safe to conclude that all the problems associated with the disruption of Western Christendom will become less baffling if we approach them by respecting the order of events and put the advent of printing ahead of the Protestant Revolt.*

The third movement is *The book of nature transformed: printing and the rise of modern science*. As with the Reformation, the author argues that *the advent of printing ought to be featured more prominently by historians*. This theme is developed mainly with regard to maps and astronomy, the trial of Galileo and the publishing activities of the Royal Society. Copernicus has already been mentioned. Newton was encouraged to publish. Galileo discouraged.

One of the illustrations is of a grandly titled *A description of the the whole world* (1606), and another is a printed challenge from Blaeu (1622) to find any errors in his printed sea charts. He wrote *Whatsover there is yet resting to be corrected or made better, is as easie to be corrected in the Cardes [charts] that are printed, as in them that are written, which we also are readie to doe at our charge, if any man can by good proofe shewe us any thing, that is to be corrected in the Cardes that are printed by us.* This is an early example of errors being, if not rewarded, at least corrected without charge.

The author gives many useful examples of the opportunities for (self)-promotion that print provides. We know much about the early history of print from the documents they printed about themselves. *Indeed, their use of title pages entailed a significant reversal of scribal procedures; they put themselves first. Scribal colophons had come last.*

The author cogently argues the importance of print for the creation of accurate maps. *But this kind of checking could not occur until voyagers were provided with uniform maps and encouraged to exchange information with map publishers.* Before print maps, like books, were usually held in fixed and safe locations. They were much to rare and valuable to be subjected to the hazards of a voyage to foreign parts. Information from merchants was sent back to trained cartographers, but without print this information could not then be sent back out for the use (and checking) by others. The development of maps (and globes) contributed to the European discovery of the rest of the world.

In the conclusion the author writes *This book has stopped short in the age of the wooden handpress. It has barely touched on the industrialization of paper making and the harnessing of iron presses to steam. Nothing has been said about the railway tracks and telegraph wires which linked European capitals in the mid-nenteenth century, or about the Linotype and Monotype machines which went together with mass literacy and tabloid journalism. The typewriter, the telephone, and a vast variety of more recent media have been entirely ignored. Too much territory has been traversed too rapidly as it is. Because contrary views have been expressed, however, it seems necessary to point out that there are irreversible aspects to the early modern printing revolution. Cumulative processes were set in motion in the mid-fifteenth century, and they have not ceased to gather momentum in the age of the computer printout and the television guide.*

And so we are back again in the present, with its own communications shift from paper to electronic media, from print to computer. I have read this book through several times and on each occasion (I am not well educated in history) I get a richer deeper understanding of the present time. I strongly recommend it to anyone who wishes to develop for themself an understanding of the human and social consequences of the growing move towards electronic publishing and the information superhighway.

VI   Reflections on Writing and Computers 8 (London 7–9 September 1995)

R. Allan Reese

Did you know Shakespeare's plot in *Romeo & Juliet* extends over six days, from a Friday morning to Wednesday? Just one of the useful titbits I picked up at the conference. Writing and Computers conferences attract a different class of computer users from TeX conferences; less oriented or sympathetic to computer science, possibly more interested in the human user. To someone like myself, running a general purpose computing service, both groups are very interesting.

These writers' conferences are dominated by people who teach writing or who study other writers, rather than by people who live by selling their own words. Also noticeably absent were publishers — possibly a good thing, as writers and publishers are necessarily protagonists. The hilarity amongst the publishers at seeing so many missed deadlines might have been unsettling. The knock-on of missed deadlines was a dynamic hypertext timetable, in the genre of an adventure game. The very-packed, constantly changing programme led to a feeling of mild panic (cf the Lentillas in Douglas Adams *Hitch-Hiker's Guide to the Galaxy*) as we yo-yoed between rooms on several floors of the Institute.

Writing about writing generates its own pressure. The monkey on your shoulder screams, "those that can do, those that can't teach." One telling comment to an academic editor, that I overheard during breakfast was: "Since you told us and the publisher that this would be *the* new definitive book, for the first time ever I've had writer's block."

The exact instructions on the presentation of abstracts were apparently ignored by most of the authors, including several of the organizers. There's a lot to be said for authors providing text and editors imposing format. As indicated above, many of the participants did not themselves appear to be sophisticated computer users, and talk of imposed stylesheets or enforcement of style through SGML would have left them cold.

And yet none of this detracted from an enjoyable and productive conference. The organization came together in a weighty and informative book of abstracts provided on arrival. Our next problem was finding time to scan the abstracts and make difficult choices. What follows therefore is a personal and partly-random selection.

In the gaps between the whirling social programme, great ideas were exchanged. One paper concluded that 'better' student writers devoted more time to structure and planning because they were so comfortable with grammar and vocabulary that these were handled automatically. Maybe 'obvious', but at another conference this year I saw a speaker howled down for suggesting that grammar should be taught more explicitly in UK schools. My own interests include software tools for supporting the various stages of writing; text formatting is one, but the words still have to be chosen and put in order. The starting point of LaTeX was supposedly the idea that the author would be relieved of the need to consider the physical appearance while the text was being written.

Another paper compared structured and 'free-text' abstracts of scientific papers. While strict quantitative measures of use and recall in the standard convenience sample of students showed no noticeable improvement, the consensus in the subsequent discussion was that the structure would be a helpful support and checklist for writers. The difficulty is always to extrapolate from volunteer groups in short-term studies to a general population developing and applying life-skills with diverse motivations. Structured abstracts ought to make comprehension easier and searching more consistent. This becomes increasingly important as we rely more on computer searches to trawl for information.

Sally Tweddle's keynote opening was well-pitched in relegating technology to 'appropriate' use, but no one picked up on her mention of a New York school*girl* who started an account of a group project with "I'll show you Joe's picture. *He*'s our best artist." What a stereotype of male domination of technology, and female subordination to an auxillary supportive role! TeX-group meetings certainly don't reflect a 50:50 sex ratio, but I wouldn't have called them male-dominated. What do other people think? Is TeX a minority sport partly because it's seen as a boys' computer-science toy?

Michael Barnett's keynote carried on in a way from Sally's: the interplay of technology and the use to which it's put. It struck a chord: a typical helpdesk interaction in the university: "Why did you do that?" — "Well, it was in the program so I just clicked on it" Technology makes things possible but must not be allowed to take over and control the task — what would *you* do if "The Machine Stops" and the technology ceases to work? [cry]

Multimedia CD technology was perhaps the dominant topic of the whole conference. We agonized about the lack of imaginative use of a 'new' medium, but maybe we do not need a *Shakespeare* of software — we need a Pasolini, or even a Tarantino. In the same way that sticking a camera into a theatre seat would not produce a 'film', just putting

text on a disk and automating the index doesn't make it exciting. The BBC/Harper team were clear as to the amount of work they had needed to put into creating a multimedia study guide to R & J, despite starting with a complete and unrevisable text.

Does hypertext have a role for other than reference material? The overwhelming majority of readers don't want to write a story of their own; they want to be *told* one (as we were, held entranced over lunch by a storyteller). PC/CD hardware is still too slow by an order of magnitude, though since the conference I've read that CD capacity will soon increase by up to 20-fold. When you open a book, you don't stare at the title page for several minutes while the rest of the book prepares itself to be read. 'The medium is the message.' In the area of design and communication, if the technology become intrusive, then *it* becomes the message, and the meaning you intended is lost. That's one reason I advise against on-line presentations at conferences using, say, PowerPoint — the audience is either amazed how slickly it works, or bored at how tackily it doesn't.

Next year's W&C meeting will take place in Barcelona. Do they need another meeting? My conclusion from the conference (and email discussion lists set up to preface and complement the conference) is that there are many themes in writing and computers being actively considered and far from worked out. Were the technology and its application fully understood, there would still be themes in education and dissemination. At some time the theme will become an anachronism; everyone will grow up as comfortable with computers as we are with pens — or do I "talk of dreams, which are but children of an idle brain, begot of nothing but vain fantasy"?

VII   The UK TeX Users Group

1   Group aims and activities

The UKTUG was founded in 1989; its activities and benefits include:

- Regular meetings covering both TeXnical matters and general typographic subjects;
- Visits to publishers, font suppliers and book producers;
- In-depth workshops, with hands-on computer sessions where appropriate;
- Negotiation of discounts on TeX relevant books with publishers.
- Distribution of public domain TeX implementations (in cooperation with the international TeX archives);
- Discount on joint UK TeX Users Group/TUG membership;
- Reduction in conference fees for the TUG annual meeting and the annual European meetings;
- The publication and distribution of *Baskerville* (the annals of the UK TeX Users Group).

2   The 1995–96 UKTUG committee

Chair R. Fairbairns
Treasurer and Membership Secretary P. Abbott
Committee Secretary C. Hewlett
Meetings Secretary M. Clark
other members K. Bazargan; D. P. Carlisle; A. S. A. Jeffrey; S. P. Q. Rahtz.

3   Future meetings

- January 1996: "Structured documentation" (with BCS electronic publishing specialist group). Planned date is January 11th, planned location, School of Oriental and African Studies. This is a follow up to this year's very successful meeting held at the Bridewell Theatre.
- March 20th, 1996: "TeX and the Internet." Location, University of Warwick. Local organizer, Malcolm Clark. Shamelessly exploiting the popular 'I-word', this meeting shows how TeX is essential to the success of the Internet, and the Internet is essential to the survival of TeX.

And all other suggestions gratefully received … Make us an offer! Maybe you would like to host a meeting on a particular subject area, or you are eager to find out more about some hot topic. Share it. After all, to burst into van der Laan-esque song "We're your friends" (copyright Disney, just like everything that isn't copyright Micro$oft).

4   Membership Matters

With this issue of *Baskerville* should be your renewal form for membership of UKTUG and/or TUG and any other services to which you subscribe. At the AGM on 18th October 1995 the normal membership rates for 1996 were confirmed as unchanged. Student membership of UKTUG has been reduced to **£5.00**. It was also agreed that for payments made before 31st December 1995 the 10% reduction on UKTUG membership would be allowed. The renewal forms shows the amounts due.

4.1   Book Discounts

We have arrangements with Addison-Wesley for their well-known TeX-related publications, and with International Thomson Publishing to supply any of the very excellent O'Reilly & Associates Inc. series of books to members.

With effect from 18th October 1995 book discounts have been increased from 10% to 20% and revised price lists will be included with *Baskerville* 5.6. We would like to remind you that the discount can be claimed on any book in the Addison-Wesley Computer Science catalogue. Just deduct 20% from the retail price and round **UP** to the next 5p. If you are unsure you can always contact Peter Abbott by phone, fax or email.

We are only allowed to offer this service to **current** members of the UK TeX User Group and/or members of TUG. Please send your order and cheque (in UK £) to Peter Abbott (address in *Baskerville* masthead). Make cheques payable

to 'UKTUG' please. Books from Addison-Wesley are delivered direct but books from O'Reilly will be routed through UKTUG. *In all cases* please notify Peter Abbott by email, phone, fax or letter when books are delivered.

4.2 Membership shareware licenses

Agreement has been reached to buy site licences for the software listed below. A member of the UK TEX User's Group is permitted to use the software (which is usually shareware) without additional payment as long as they are a member of the group. It is provided for personal use only.

- OzTeX version 1.8 – Either obtain a copy from the CTAN archive, or available from Peter Abbott.
- Mac Dvips and Mac METAFONT.
- Alpha – a TEX-aware text editor for Macintosh obtainable from CTAN or Peter Abbott
- Eddi4TeX – a TEX shell and text editor for MS DOS obtainable from Peter Abbott (the access code will be mailed direct from Germany).

4.3 Membership numbers

As at October 1995 the membership stood at:

UKTUG	70
UKTUG(Student)	2
Full TUG and UKTUG	99
Basic TUG and UKTUG	6
Full TUG and UKTUG (Student)	4
Basic TUG and UKTUG (Student)	1
Institutional	5
Full TUG	2
Basic TUG	0
TUG and UKTUG (Student)	
Total	189

Institutional members: Warwick University, Eyre & Spottsiwoode, Anglia Polytechnic University, BPC Books & Journals, and Elsevier Science Ltd.

5   UK TEX Users' Group statement of accounts

5.1   Income and Expenditure 1994–95

Income		Expenditure
UKTUG	3578.00	
TUG	3540.00	1250.00
Membership Admin	347.50	32.10
Disc Service	662.79	377.80
Book Service	1252.90	1361.89
CDROM Service	565.00	354.54
LaTeX3 fund	6323.05	2918.00
Baskerville	10.00	1311.54
Bursary	76.91	
Meetings		
20/10/94	270.00	53.25
19/1/95	5513.00	2112.24
4/4/95	260.00	100.91
7/6/95	875.00	237.94
Committee meetings		
11/7/94		300.00
1/11/94		128.40
21/2/95		96.50
23/5/95		127.05
Bank Interest/Charges	248.05	16.00
Miscellaneous		250.67
Communications	250.00	387.84
Hardware		468.83
Gutenberg		200.00
EuroTeX		200.00
Total	**23772.20**	**12285.40**

5.2 Profit/Loss Account 1994/95

Account	Brought Forward	Income	Expenditure	Profit/Loss
TUG	−566.18	3540.00	1250.00	1723.82
UKTUG		3578.00		
Membership Admin		347.00	32.10	315.90
Disc Service	491.26	662.79	377.80	776.25
Book Service	502.62	1252.90	1361.89	393.63
CDROM Service	−61.18	565.00	354.54	149.28
LATEX3 Fund	804.68	6323.05	2918.00	4209.73
Baskerville		10.00	1311.54	−1301.54
EuroTeX			200.00	
Bursary		76.91		
Group meetings				
20/10/94		270.00	53.25	216.75
19/1/95		5513.00	2112.24	3400.76
4/4/95		260.00	100.91	159.09*
7/6/95		875.00	237.94	637.06*
Committee meetings				
11/7/94			300.00	
1/11/94			128.40	
21/2/95			96.50	
23/5/95			127.05	
Bank		248.05	16.00	232.05
Miscellaneous		250.50	1307.24	
		23772.20	**12285.40**	

(** Still Open*)

UK TEX Users' Group funds are as follows

	31/7/94	31/7/95
Bank statement	10079.13	21881.48
Uncashed cheques	387.49	703.04
True balance	9691.64	21178.44
Represented by		
TUG funds	−566.18	1723.82
UKTUG funds	8520.44	12925.73
Disc Service	491.26	776.25
CD ROM Service	−61.18	149.28
Book Service	502.62	393.63
LATEX3 Fund	804.68	4,209.73
	9691.64	**21,178.44**

Peter Abbott
UK TEX Users' Group Honorary Treasurer 1994–95

6   Obtaining TEX

From the network
The UK TEX Archive on `ftp.tex.ac.uk` is part of the CTAN (Comprehensive TEX Archive Network) collaborating network of archives on the Internet organised by the TEX Users Group. The three main archives follow the same structure and have identical files (`ftp.tex.ac.uk`, `ftp.shsu.edu` and `ftp.dante.de`).

The CTAN archives all run an enhanced *ftp* server which supports dynamic compression, uncompression, and archive creation options. Fetch the top-level file `README.archive-features` for information. The server also supports site-defined commands to assist you. Please read `README.site-commands` for a brief overview.

Details of where to find public domain, or shareware, TEX packages for different machines and operating systems are given below.

Please report any problems with CTAN archives via email to `ctan@shsu.edu`. The entire archive is available on CDROM as the 'TEXcetera' package from Prime Time Freeware, 370 Altair Way, Suite 150, Sunnyvale, CA 94086 USA (`ptf@cfcl.com`). This is also distributed by the TUG office, and in the UK by Lasermoon Ltd (email `info@lasermoon.co.uk`, phone 01329 834944).

Unix tapes
David Osborne is no longer able to supply Unix TEX tapes, partly because there is no longer a reliable, up to date, master to copy. We expect that most Unix users have network access, or a CD reader. We recommend the teTEX distribution on CTAN.

CDROM
Apart from the CTAN 'TEXcetera' available from Prime Time Freeware, the UKTUG distrbutes the 4AllTEX CDROM, created by the Dutch TEX Users Group (NTG), now in its 3rd edition. This costs £25 for 2 CDs, and is for DOS users; it contains *everything* you can think of (programs, drivers, fonts, macros, documentation), all accessible via a friendly shell written in 4Dos.

PC and Mac disks
The UKTUG distributes an emTEX kit for PCs, and an OzTEX kit for Macintosh. The cost covers copying and postage costs, together with the shareware fee for OzTEX (and other Mac programs) and Eddi4TEX. Each set costs £30, and is available from Peter Abbott, 1 Eymore Close, Selly Oak, Birmingham B29 4LB. Cheques must be payable to 'UKTUG'. Please note that this service *is available to UKTUG members only*. Each set comes with an installation guide, and (at least) full TEX and METAFONT, a previewer, a PostScript driver, and CM fonts. Two update disks a year will be sent out automatically, with the current version of LATEX 2ε, and other goodies. A subscription service is available for subsequent years. In addition, subscribers can request up to 3 disks a year with any material from the CTAN archives, but this will be supplied 'as is', without instructions.

Enquiries for TEX for the Atari ST etc. can be directed to: The Fast Club, 7 Musters Road, Nottingham NG2 7PP. Phone 01602 455250, fax 01602 455305. They also supply a variety of TEX-related software in Atari format.

The main directories which make up CTAN are listed below; readers are referred to David Jones' *Index of TEX Styles and Macros* for details of macro packages and individual style files. This can be found in CTAN as `info/tex-styles-and-macros.txt`

biblio bibliography-related files, such as BIBTEX.

digests back issues of TEX-related periodicals

dviware contains the various dvi-to-whatever filters and drivers

fonts fonts, both sources and pre-compiled

graphics utilities and macros related to graphics

help overviews of the archive and the TEX system

info files and tutorials which document various aspects of TEX

indexing utilities and related files for indexing

language material for typesetting non-English documents

macros macros packages for TEX and style files

support programs which can be used in support of TEX

systems complete system setups, organized by operating system

tools the various archiving tools used on CTAN

web contains WEB-related files and utilities

VIII   Report of the 1995 UKTUG AGM

R. A. Bailey

Official report of the AGM of the UK TEX Users Group, held at Queen Mary and Westfield College, University of London (Room G2 in the School of Mathematical Sciences) on Wednesday 18 October 1995 at 1130 hours

There were twelve members present. In the absence of C. A. Rowley, the chair was taken by S. P. Q. Rahtz. The following is a brief summary of the business transacted; it is categorized by, roughly, the numbered agenda items.

1. **Report of the 1994 AGM** This report had already been published in *Baskerville* 5.1. Copies were also available at the meeting. The report was received as correct.
2. **Chairman's Report** The Group's Chairman, C. A. Rowley, had sent his written report, which was read out to the meeting. It is published following this article.
3. **Approval of Accounts** The Treasurer, P. Abbott, gave his report. Copies of the audited accounts for 1994–95 were presented. These accounts appear elsewhere in this issue.
   The following points were made during the discussion of the report.

   - The bank account had been changed to one which gave a higher rate of interest but on which there was a charge for cheques in excess of eight per month. The change gives the Group a net benefit.
   - The Committee had authorized the purchase of various equipment for Peter Abbott during the year so that he could carry out his duties as Membership Secretary and as provider of membership services such as discs and books.
   - Now that TUG is no longer paying the Group for production of TTN or TEXhax, the income due from TUG to UKTUG is not of the same order of magnitude as the payments due from UKTUG to TUG. In 1995–96 it is likely that real money will have to be transferred from UKTUG to TUG.
   - The accounts for the meetings in April 1995 and June 1995 are not yet closed.
   - UKTUG donated some money to bursary funds to enable less well-off people to attend various TEX user group meetings in 1995; it also gave Cathy Booth Memorial prizes at some of these meetings. These items of expenditure do not yet show in the accounts, as the financial year ended on 31 July 1995.
   - As reported in *Baskerville* 5.3, the Committee sent Robin Fairbairns as its delegate to the April 1995 GUTenberg meeting on the Ω project, paying his expenses from the Group's funds. It was not clear which heading in the accounts included this item.

   The meeting thanked the Treasurer for his hard work on behalf of the Group.
4. **Appointment of Auditor(s)** The Treasurer reported that Colin Smith had audited the accounts for 1994–95, was happy with them, and had made some helpful suggestions. The meeting gave formal thanks to Colin Smith and reappointed him auditor for 1995–6.
5. **Membership Fees** The Treasurer proposed the following motion, on behalf of the committee:

   The membership fee for 1996 shall be £20.00 for full membership or £10.00 for full-time student membership.

   D. P. Carlisle then proposed an amendment: that the membership fee for full-time students be £5.00. The purpose of this amendment was to encourage students to join. M. Clark seconded the amendment, which was passed *nem. con*. The amended motion was then passed *nem. con*.
6. **Inducement to pay subscriptions early** The Treasurer proposed the following motion, on behalf of the committee:

   Any individual member who pays his or her subscription for one calendar year before the end of the previous calendar year shall be entitled to a discount of 10%.

   The motion was then passed *nem. con*.
7. **Approval of the annual subscription for institutional members** The Treasurer proposed the following motion, on behalf of the committee:

   The membership fee for 1996 shall be £100.00 for institutional membership.

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This was passed *nem. con.*

It was also decided that *Baskerville* should include a list of current institutional members of UKTUG whenever it mentioned institutional membership.

8. **Announcement of new Chairman** The Committee Secretary announced that, as a result of the election, the new Chairman of UKTUG would be R. Fairbairns. She reported details of the vote-counting, which have already been published in *Baskerville* 5.5. The meeting thanked both candidates for standing for election and B. A. F. Wehrfritz for his help in counting the votes.

9. **Election of Committee** Of the previous committee, P. Abbott (as Treasurer), D. P. Carlisle and C. Hewlett continued. Of those retiring, M. Clark and A. S. A. Jeffrey stood for re-election. One further nomination for committee membership had been received for K. Bazargan. These three people were all elected to the committee, bringing the total size of the committee to six (excluding the Chair).

10. **Report on *Baskerville*** S. P. Q. Rahtz, the current editor of the Group's newsletter *Baskerville*, gave a report on the second full year in which *Baskerville* had appeared at intervals of approximately two months. Issue 4.6, devoted to 'Frequently Asked Questions' and edited by R. Fairbairns, had been a great success. It had been reprinted by NTG, and translated to appear in GUTenberg and the newsletters of CSTUG, CyrTUG and DANTE. Any FAQ gets out of date and needs correcting, so *Baskerville* 5.6 will be a new FAQ issue, and it may become an annual publication.

The editor thanked all contributors to *Baskerville*, particularly R. A. Bailey for her series on 'Maths in LaTeX' and M. Clark for his ongoing 'Gleanings' column. Having regular contributions like this gives the editor a big psychological boost when he starts work on each issue. He asked other members to consider writing regular contributions for *Baskerville*.

The editor also thanked R. Fairbairns and J. Fine for their sterling work in producing and distributing *Baskerville*. It was noted that J. Fine had withdrawn from this in May 1995, since when R. Fairbairns had carried the whole burden of both jobs.

The editor reported that he cooperates with the editor of MAPS, the newsletter of NTG, so that MAPS and *Baskerville* republish articles from each other that will be of interest to both memberships. He recommended continued such cooperation with other TeX users' groups.

Baskerville had figured in discussions at the annual TUG meeting in Florida in July 1995. There had been two sessions in which the editors of the various newsletters exchanged information and problems. In addition, D. E. Knuth had been presented with a copy of *Baskerville*: he had enjoyed reading it so much that he had asked for a subscription to it.

S. P. Q. Rahtz had now become Secretary of TUG. He was continuing his work on CTAN, and so could not continue to edit *Baskerville* beyond the end of 1995. A new editor for *Baskerville* was therefore desperately needed.

The meeting thanked the outgoing editor for his success in making *Baskerville* such an interesting and regular publication during the two-and-a-half years in which he had edited it.

11. **Topics for Meetings** The Meetings Secretary, M. Clark, reported that the following meetings were in various stages of preparation, and welcomed any volunteers to help with their organization.

- A meeting on scientific publishing with TeX, to involve various learned societies and publishers of scientific journals. This had been very much the idea of J. Fine, and might not go forward now that he had left the Committee.
- A meeting for university academic registrars to address such issues as regulations for the appearance of PhD theses set in (La)TeX. The appropriate body UCISA had been approached but was being slow to respond.
- A meeting on 'TeX and the Internet' would definitely take place at Warwick University at Easter 1996.
- There will be another joint meeting with BCSEP on portable documents. It will take place in January or February 1996 and will be organized by BCSEP.

The Meetings Secretary reported his disappointment at the poor take-up at training meetings. At Easter 1995 a training meeting had been held on MakeIndex and BiBTeX with the top trainers in each subject. In spite of members' expressed desire for such training, less than half a dozen people had attended the meeting. Why? A training meeting on emtex had been advertised for later in the year, but had been cancelled after only two enquiries had been made about it.

The meeting discussed why the attendance at the AGM is always so poor. A possible reason is that many potential attenders are academic staff, for whom October is one of the busiest times of year.

The possibility of a meeting aimed specifically at publishers (and priced accordingly!) was also discussed.

12. **Services to Members** P. Abbott reported that UKTUG gets a steady modest income from the sale of books, in

spite of the discount to members. It was agreed that the members' discount should be increased from 10% to 20%. The remaining 5% still covers the administrative costs of the service (25% is the discount to UKTUG).

The meeting congratulated P. Abbott on updating disc sets for emtex and sending them out. He reported that the majority of requests are for emtex, LATEX 2ε and their updates: their is little demand for other material from the archive.

There was some discussion of the feasibility of producing a CDROM of TEX-ware for unix or for the Macintosh. It was left to the new Committee to consider this in more detail.

13. **Honorary Member** It was agreed to award honorary membership to D. E. Knuth.
14. **Other Users' Groups** It was agreed that one free copy of each issue of *Baskerville* should be sent to each other TEX users' group.
15. **Afternoon Meeting** It was announced that the meeting on 'TEX for the non-technical' advertised for that afternoon had had to be cancelled, as there had been only five applications to attend by the deadline of one week in advance. The acting chairman apologized to the meeting organizers, speakers and those who had hoped to attend the meeting.
16. **Thanks** The meeting thanked the retiring Chairman C. A. Rowley for running the UK TEX Users' Group so successfully for two years, and, in particular, steering the Group through a difficult patch. It also thanked R. A. Bailey for her four years' work as Committee Secretary.

The meeting closed at about 1310 hours.