

Production of Teaching Material for Undergraduates

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Here are some notes on the production of OHP slides and the production of .pdf for web pages which I thought might be helpful to colleagues.

1 OHP slides

OHP slides can be conveniently produced using the `slides` package. Here is a sample of the source code needed to produce four slides about the real numbers.

Notice that we use `slides` in place of `article` in the `documentclass` line of the code. The main body of text, following

```
\begin{document}
```

consists of the text for the slides enclosed in the environment

```
\begin{slide}
.
.
.
\end{slide}
```

The result is that each slide appears on a single sheet of A4 which can be photocopied onto transparency for use on an OHP. The package is designed to use sans serif fonts for text because received wisdom says this is easier on the eye. However, the mathematical symbols are typeset in their normal style. Everything is automatically typeset at the appropriate large size.

Each slide is numbered in the lower right hand corner.

2 Typsetting Selected Slides

If you have a large document with many slides and you wish to typeset and print only, say, slides 2,3,4,5,11 then simply include

```
\onlyslides{2-5,11}
```

in the preamble.

If you want to typeset all slides from the 15th then you can simply include the line

```
\onlyslides{15-9999}
```

where 9999 is chosen to be any number larger than the total number of slides. [Convenient if you do not recall how many slides you have.]

In my sample document, the lines

```
\message{Please type the slides you want, e.g.%  
2-5,7,10-9999}  
\read16 to \xx
```

```
\onlyslides{\xx}
```

are commented out. If you remove the % symbols to activate these lines then you will be asked dynamically which slides you intend to print and you can respond by typing

```
2-5,11
```

at the prompt.

3 Printing slides 4 or more to a page

Once typeset the slides can be printed small size, 4 to a page, by following Peter Cameron's advice, or alternatively by using my `smallslides` document class.

This is useful both for the lecturer's notes and for making a handout or placing the slides on the web.

The `smallslides` document class is nothing more than a modified article class. The main changes involve the definition of the new `slides` environment, and the default to two column format.

To use this all you need do is place the file `smallslides.cls` in your tex inputs folder/directory or in your own top level directory, and change the first line of your slides document to

```
\documentclass{smallslides}
```

4 Creating PDF for the web

This advice is directed mainly to Mac users.

Many of us do not have Adobe Acrobat and Distiller installed on our machines, so Wilfrid's guidelines may not be helpful. In addition, many of us do not have postscript printers directly connected to our computers.

However postscript files can be converted to pdf on our departmental machines using the software `ps2pdf`. Transfer your `foo.ps` file to your web directory first and then use the command line

```
ps2pdf foo.ps
```

If you have difficulty creating a `.ps` file in the first place then transfer your `tex/latex` source to the `unix/linux` environment and follow Peter Cameron's advice. Remember that the commands `pdflatex` and `pdftex` are not able to cope with postscript included using Knuth's `\special` command. So, if you use any of the `graphics`, `graphicx`, `PStricks` packages or the `dvips`, `ps` driver for `Xy-pic` then you will need to create the `.ps` file from the `tex` source `foo.tex` by running `latex` and `dvips` as follows:

```
latex foo
dvips -o foo.ps foo.dvi
ps2pdf foo.ps
```

5 Using Acrobat and Distiller

The Adobe Distiller provides an alternative to `ps2pdf`. Make sure to set it to embed all fonts and subset embed all below 100%.

The PDF can be read by Acrobat Reader (which is free). If you have the full version of Acrobat (which currently costs £50 for the Mac under a special licence agreement held by computer services) then you can add links and other embellishments to your PDF, as I have done with this document. Unfortunately, very few in the MRC have access to a Mac with sufficient RAM or clock speed to run Acrobat.