1 The Supertabular - October 1992

Here is the description of a new style file called `supertab`. This new style offers a new environment, the `supertabular` environment. As the name says it is an extension of the normal `tabular` environment.

With the original `tabular` environment a tabular must always fit on *one* page. If the tabular becomes too large the text overwrites the page's bottom margin and you get an `Overfull vbox` message.

The `supertabular` environment uses the `tabular` environment internally, but it evaluates the used space every time it gets a `\\` command. If the tabular reaches the textheight, it automatically inserts an `\end{tabular}` command, starts a new page and inserts the tablehead on the new page continuing the tabular.

New commands to use with `supertabular` are:

`\tablefirsthead{...}`	defines the contents of the first occurence of the tabular head. The use of this command is optional. Don't forget to close the head by a `\\` or `\newline`.
`\tablehead{...}`	defines the contents of all subsequent ocurrences of the tabular head. Don't forget to close the head by a `\\` or `\newline`.
`\tabletail{...}`	defines something which should be inserted before each `\end{tabular}`, except the last.
`\tablelasttail{...}`	defines something which should be inserted before the last `\end{tabular}`. The use of this command is optional.
`\topcaption{...}`	
`\bottomcaption{...}`	
`\tablecaption{...}`	Provide a caption for the super-table, either at the top or at the bottom of the table. When `\tablecaption` is used the caption will be placed at the default location, which is at the top.

Note that you define new lines inside the supertabular as normal by `\\` or `\\[...pt]`. All column definition commands can be used, including `@{...}` and `p{...}`. You can *not* use the optional positioning argument and the width argument which are possible with the `\begin{tabular}` command.

Here is an example of a supertabular. You will find the definitions at the end of the supertabular.

Number	Number^2	Number^4	Number!
1	1	1	1
2	4	16	2
3	9	81	6
4	16	256	24

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Number	Number^2	Number^4	Number!
5	25	625	120
6	36	1296	720
7	49	2401	5040
8	64	4096	40320
9	81	6561	362880
10	100	10000	3628800
11	121	14641	39916800
12	144	20736	479001600
13	169	28561	6.22702080E+9
14	196	38416	8.71782912E+10
15	225	50625	1.30767437E+12
16	256	65536	2.09227899E+13
17	289	83521	3.55687428E+14
18	324	104976	6.40237370E+15
19	361	130321	1.21645100E+17
20	400	160000	2.43290200E+18

Table 1: This table is split across pages

And here are the definitions:

```
\newcommand{\tbsp}{\rule{0pt}{18pt}}
                  % I use \tbsp to get a vertical distance after \hline
\tablefirsthead{\hline  \multicolumn{1}{|c}{\tbsp Number}
                       & \multicolumn{1}{c}{Number$^2$}
                       & Number$^4$
                       & \multicolumn{1}{c|}{Number!} \\ \hline\tbsp  }
\tablehead{\hline \multicolumn{4}{|l|}%
                {\small\sl continued from previous page}\\
           \hline \multicolumn{1}{|c}{\tbsp Number}
                       & \multicolumn{1}{c}{Number$^2$}
                       & Number$^4$
                       & \multicolumn{1}{c|}{Number!} \\ \hline\tbsp  }
\tabletail{\hline\multicolumn{4}{|r|}%
                {\small\sl continued on next page}\\\hline}
\tablelasttail{\hline}
\bottomcaption{This table is split across pages}
\begin{supertabular}{| r@{\hspace{6.5mm}}| r@{\hspace{5.5mm}}| r | r|}
1   &     1  &        1  &            1    \\
2   &     4  &       16  &            2    \\
3   &     9  &       81  &            6    \\
```

```
4   &    16  &      256  &          24    \\[5mm]
...
19  &   361  &   130321  &  1.21645100E+17\\
20  &   400  &   160000  &  2.43290200E+18\\
\end{supertabular}
```

Here is another example whith a `p` column-definition. The tablehead is the same as above. The tabletail is a double `\hline` `\arraystretch` is set to `1.5` and font size is `\small`.

Table 2: This table should also be split accross pages.

Number	Number^2	Number^4	Number!
1	1	1	here is a relative short entry
2	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
3	1	1	here is also a long entry, where also a line break should occur
4	1	1	here is also a long entry, where also a line break should occur
5	1	1	here is a relative short entry
6	1	1	here is also a long entry, where also a line break should occur
7	1	1	here is also a long entry, where also a line break should occur
8	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
9	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
10	1	1	here is also a long entry, where also a line break should occur
11	1	1	here is also a long entry, where also a line break should occur
12	1	1	here is a relative short entry
13	1	1	here is also a long entry, where also a line break should occur
14	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur

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Number	Number^2	Number^4	Number!
15	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
16	1	1	here is also a long entry, where also a line break should occur
17	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
18	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur

Here is the same table again, but this time using the supertabular* environment and stretching the table to the full width of the text.

Number	Number^2	Number^4	Number!
1	1	1	here is a relative short entry
2	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
3	1	1	here is also a long entry, where also a line break should occur
4	1	1	here is also a long entry, where also a line break should occur
5	1	1	here is a relative short entry
6	1	1	here is also a long entry, where also a line break should occur
7	1	1	here is also a long entry, where also a line break should occur
8	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
9	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
10	1	1	here is also a long entry, where also a line break should occur

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Number	Number^2	Number^4	Number!
11	1	1	here is also a long entry, where also a line break should occur
12	1	1	here is a relative short entry
13	1	1	here is also a long entry, where also a line break should occur
14	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur
15	1	1	and here is a long entry, where line breaks and line breaks and line breaks have to occur

2 Known problems

- When a float occurs on the same page as the start of a supertabular you can expect unexpected results.

  When the float was defined on the same page you might end up with the first part of the supertabular on a page by its own. When the list of unprocessed floats is not empty it will be made empty by the first part of the supertabular (if it is split across pages that is) because it calls `\clearpage`.

- You should not use the supertabular *inside* a floating-environment such as `table` as this will result in TeX trying to put the whole supertabular on *one* page.

- In some instances you might still end up with overfull `\vbox` messages. These instances are described in the (documented version of) the style file itself.