BLUe's Transparencies— to finish up with

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Abstract

TeX macros for formatting transparencies are provided.
The macros have been designed with reusability of earlier formatted document parts in mind, with a wink to maintenance of the tranparency set.

Keywords: Education, foils, formatting, generic style, slides, TeX, (black-and-white) transparencies.

1   Introduction

This is the second paper[1] in the series where I select a BLUe-way[2] of formatting with TeX from the multitude of confusing possibilities.

When I started to use TeX in the mid-80-ies my main use was formatting and typesetting reports and—derived from those—preparing and making transparencies. Not hindered by any experience—as newbie TeXie—I modified LaTeX's `report.sty`. This work emerged in `trspar.sty`. It did cost me a lot of time, compensated by that I learned something from LaTeX's coding style. I released this preliminary and hardly documented version on the TEX-NL network—no comments nor users :-(—and have used this tool for my presentations, ever since.

Why `trspar.sty`? Of course I was aware of SliTeX, but rejected it because it
- was not just another style, the (outer) markup had to be adapted
- was restricted to LaTeX
- did not provide for headers or footers.

Since then I have among others heard of
- FoilTeX (Hafner)
- Seminar (Rahtz and Goossens), and
- Voyager (Jet Propulsion Lab).

Sensible packages to start with, but my use is different. I don't need colours other than for background, now and in the foreseeable future. That is, basically I use two 'colours': text and background. When the foils are made by Xerox copying, I can just copy them on the appropriate coloured backgrounds. (Or take my BLUe background — or whatever colour is suited for the occasion— with me.) Too many colours make a transparency like a fancy-fair. Sometimes appropriate and fun. For my work I don't need that, generally.

Let us consider classes of transparency sets. I know of the following kind of presentations, where transparencies are often used
- business, with roughly a dozen or so words per transparency and a pie-chart now and then. Much perfection in there and reused frequently.
- scientific, mostly single-shot presentations and therefore hardly reused (no maintenance).
- courses, a large set, typically a hundred or so, with accompanying notes and quite some maintenance involved.

From the above my conclusion is that we need tools for perfect and fancy transparencies to assist business-like presentations, and tools which can handle the maintenance aspects gracefully.

The Seminar tool is LaTeX-based, and does not pay special attention to the maintenance aspects. For business presentations it might do.

What is the problem? Why not just use plain with some suitable `\magnification`, or document `trspar.sty` and that is it? Well, ... the problems are twofold. First the preparation of transparencies is an art too.[3] And, second there is the selection problem, what to use from what is available, or develop your own style from. To my experience the latter is important especially in relation with the art issues. Once the tool is personalized one can go for working like a craftsman. Requirements are: simplicity and extensibility.

Essentially, I have used plain with some magnification and some fancy headings. So this is similar to van Oostrum's Fancyheadings, modulo some syntactic sugar.

Furthermore, the coding of `trspar.sty` is a too complex inheritance from LaTeX, certainly in relation to its task. (I had to modify several LaTeX files, not only `report.sty`.)

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[1] The first paper was BLUe's Bibliography, MAPS 93.2. The third is BLUe's Verbatim, MAPS 94.1. Projected are BLUe's Pictures and BLUe's Format.

[2] BLU stands for Ben Lee User of the TeXbook fame. BLUe is its cousin which I adopted. The idea is that like in Math the basics are explained to jump off from, to develop your own way.

[3] I'm much surprised that I don't use `\subhead` so often, but instead `\shtitle`.

Second, I like a simple, generic and flexible tool which can be adapted easily, be it extended or customed to (LA)TEX.

Third, I like a tolerant tool which allows reuse of already 'formatted in the small' document elements. I assume that for markup in the small plain TEX is used or macros from a general toolbox, which combine easily with plain, let us say which form an orthogonal extension.
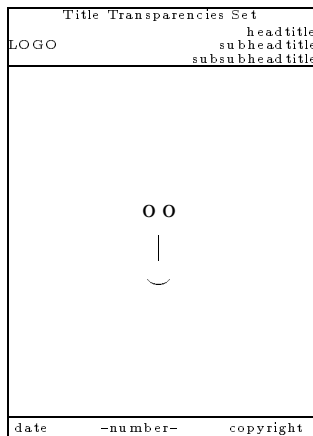
My envisioned use is that people will start from a report or so, and strip off all the 'redundancy' until the main document elements for transparencies remain.[4] Be it a table, some math or graphics, already marked up in the small and *simply reused.* I had this on my mind ever since I started in the computer-assisted document preparation area. I labelled it from report to transparency.[5]

Notations and definitions. Generic means that the user markup remains invariant.

2 Design

We have two issues: the regular transparencies (pages), and the title page. I consider the latter the exception.

Layout regular transparency. I like to distinguish a header, page proper, and the footer.

The header part consists of
- the title of the set—positioned at the top, centered
- logo—positioned left—and
- context information—positioned right to three levels— reflecting the head, subhead and subsubhead titles, if any.

There is much similarity in spirit with the running head of a book.

The page contents has the structuring commands `\head`, `\subhead`, and `\subsubhead`. For the markup in the small, plain TEX or any compatible extension can be used.

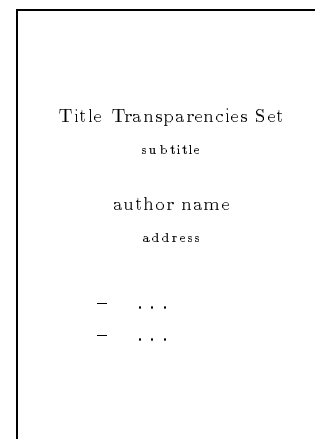**Footer.** I chose for the footer the date positioned left, the copyright positioned right and the transparency 'num-ber' centered. The header and footer are separated by an `\hrule` from the contents proper.

Practice dictated also something like `\continue`, with function that the current transparency will be continued on the next.

Corrections and additions. For a large set this means to prepare these pages separately. In order to do so the environment parameters must be appropriately filled—the titles of the set and the various heads—and it needs its own (extension) date, and page number suffixed by a, b, ... See Appendix C for an example.

I also divide a large collection into logical smaller sets with numbering relative to each set, prefixed by a characterization symbol.

Layout title transparency. I like to distinguish a title, a subtitle, author name and address, and a list of main items to be treated.

3 Implementation

There are three main issues: fonts, regular transparencies, and the title page.

Fonts. I chose not to use too many fonts. This makes it easier to customize with fonts of your choice.[6]

The benefits which come with PostScript—especially the many professional fonts—are not special for the making of transparencies, and therefore I refrained from those 'specials' for the moment.

Title page. For the data of the title page I adopted the toks variables: `\title`, `\stitle`, `\author`, `\address`, `\contents`. As can be seen from this I also typeset a table of contents below the title and author information, that is a reasonable list of the main issues to be treated. The user is encouraged to supply in the contents toks variable some `\bitem`-s. The title page is set by `\maketitle` invoked by the (first) `\head`.

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[4] I know that people involved in education start the other way round and obey Gagné's principles.

[5] The title of an early-80-ies RC-RUG report of mine, called (in Dutch) 'Van rapport naar transparant.' Another approach is to include 'transparencies' as 'illustrative summaries' in the article.

[6] Perhaps when I'm more mature with METAFONT and PostScript I might have a strong opinion on these matters.

Regular transparencies.   Here we have two aspects: what is needed as markup commands, and what is done automatically with respect to the header and footer.

- the markup commands are `\head`, `\subhead`, and `\subsubhead`, all with the title as argument. The argument must be terminated by a blank line (or a `\par`) in the TEXbook spirit.[7] For the markup in the small just plain TEX commands can be used.

- the header and footer are set automatically, with information distilled from the structure commands and the title. A (user-supplied) logo is set too.

Summary of commands

Token vars

`\address`	`\identification`
`\author`	`\shtitle`
`\contents`	`\sshtitle`
`\crowner`	`\stitle`
`\htitle`	`\title`

Definitions

```
\continue{...}
\head#1\par{...}
\maketitle{...}
\nxttrs{...}
\regularhead#1\par{...}
\subhead#1\par{...}
\subsubhead#1\par{...}
```

Conclusion

The macros obey the adage: prototype, revise and rewrite. `trspar.sty` can be seen as the prototype. `trs.tex` is simpler, more flexible, faster, and uses less resources.

References

The TEXbook and the LATEX book are not explicitly mentioned, because I assume that these are omni-present.

[1] Goossens M, S.P.Q. Rahtz (1994): Colour slides with LATEX and Seminar. Baskerville, 4,1, 8–12.

[2] Hafner J. (1992): FoilTEX, a LATEX-like system for typesetting foils. *TUGboat* 13, no. (3), 347–356.

[3] Hemel J., C.G. van der Laan, R.C.G.M. Lauwerier (1989): Het maken van transparanten voor overhead-projectie.RC-Rapport 23. (In this report a set of 4 characteristic transparencies—a drawing, a bar-chart, a pie-chart, a list of items with some formulas—is selected, and the aspects which come along when making these by hand, by Wordperfect, or by LATEX, are discussed. The results are shown and the needed amount of work for each approach is summarized among others.)

[4] Hout J.F.M.J., M.J.A. Mirande, E.B. Smuling (1981): Geven van hoorcolleges. Aula 807. (Apart from the useful survey aspects it supplies also references to Gagné's work.)

[5] Oostrum P van (1989): Fancyheadings. From the fileserver.

Appendix A: The file trs.tex

A sample example is in Appendix B.

```
    %trs.tex Febr. 1994  Version 1.0
    %Author: C.G. van der Laan, Hunzeweg 57, 9893PB
    %   Garnwerd, The Netherlands
    %   05941-1525, cgl@risc1.rug.nl.
    %Purpose: Preparing transparencies from
    %   TeX marked up copy.
    %
  1 \font\titlefont=cmr12 scaled1440\relax
  2 \font\shfont=cmr12 scaled1200\relax
  3 \font\sshfont=cmr12
  4 \magnification1728 %2074
  5 \font\ffont=cmr7
  6 \def\large{\shfont\baselineskip3.25ex}
  7 \def\small{\ffont\baselineskip3.5ex}
  8 %
 11 %Customize what is set by \magnification
 12 \hsize=17.5truecm \vsize=19truecm
 13 \hoffset-1truecm\voffset3.5truecm
 14 %
 21 \newtoks\identification
 22     \identification={\today}
 23 \newtoks\crowner
 24 \newtoks\title
 25 \newtoks\stitle
 26 \newtoks\contents
 27 \newtoks\author
 28 \newtoks\address
 29 \newtoks\htitle
 30 \newtoks\shtitle
 31 \newtoks\sshtitle
 32 %
101 \def\head#1\par{{\maketitle\vfil\eject}
102     \htitle={#1}\shtitle={}\sshtitle={}
103     \centerline{\large#1\quad}\smallskip
104     \let\head\regularhead\pageno=1 }
105 %
106 \def\regularhead#1\par{\vfil\eject
107     \htitle={#1}\shtitle={}\sshtitle={}
108     \centerline{\large#1\quad}\smallskip}
109 %
110 \def\subhead#1\par{\shtitle={#1}\sshtitle={}%
111     {\large\goodbreak\medbreak\noindent#1%
112      \smallskip\nobreak}}
113 %
114 \def\subsubhead#1\par{\sshtitle={#1}%
115     {\sshfont\medbreak\goodbreak\noindent#1%
116      \smallskip\nobreak}}
117 %
118 \def\nxttrs{\vfil\eject}
119 \def\continue{\vfil
120     \rightline{\dots continued}\eject}
121 %
201 \headline={\line{\vbox to0pt{\vss
202     \centerline{\large\strut\the\title}
203     \vskip2ex
204     \line{\logo\hfill\vbox{%
205       \llap{\strut\the\htitle}
206       \llap{\strut\the\shtitle}
207       \llap{\strut\the\sshtitle}}}
208     \vskip1ex
209   \hrule width\hsize height1pt
210   }}%end hbox
211 }%end headline
212 %
251 \def\thepage{\folio}
252 %
253 \footline={\vbox to 0pt{%
```

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[7] There is a great variety with respect to parameter termination: just a parameter within curly braces, or `\end...` terminators, or enclosed within *-s (TUGboat), or ... Despite the arbitrariness I favour especially here Knuth's convention to terminate the parameter by a blank line—or a `\par`—because it is close to natural markup: heads take a line by themselves. No run-in text.

```
254     \hrule width\hsize height1pt
255     \vskip.5ex
256     \hbox to\hsize{%
257       \rlap{\small\the\identification}%
258           \small\hfil--\thepage--\hfil
259       \llap{\small\copyright\the\crowner}%
260     }\vss}%end vbox
261 }%end footline
262 %
301 \def\maketitle{\footline={}\headline={}
302     \bigskip
303     \centerline{\titlefont\the\title}
304     \smallskip
305     \centerline{\the\stitle}
306     \bigskip
307     \centerline{\large\the\author}
308     \smallskip
309     \the\address
310     \vskip7ex
311     \centerline{\vbox{\hsize.5\hsize
312       \large\baselineskip=4ex
313       \the\contents}}%
314 }%end maketitle
315 %
801 %Auxiliaries
802 \def\\{\hfil\break}
803 \def\bitem{\item$\bullet$}}
804 \def\today{\ifcase\month\or Jan\or Feb\or
805     March\or April\or May\or June\or July\or
806     Aug\or Sept\or Oct\or Nov\or Dec\fi
807     \ \number\year}
808 %
901 %Personalisation
902 \crowner={cgl}
903 \author={Kees van der Laan}
904 \address={%
905     \centerline{Hunzeweg 57, 9893PB, Garnwerd}
906     \centerline{The Netherlands, 05941-1525}
907     \centerline{cgl@risc1.rug.nl}}
908 \font\calx=cmsy10 scaled \magstep2
909 \def\logo{\vbox to 0pt{\vss
910   \rlap{{\calx N}ederlandstalige}
911   \rlap{\hskip1em{\calx T}\kern-.2ex
912         \raise-.5ex\hbox{E}\kern.1exX}
913   \rlap{\hskip2em{\calx G}ebruikersgroep}%
914 }}
915 \overfullrule0pt
916 \endinput
```

Contents

```
    %
    History of changes
    Feb 1994   Release Version 1.0
    d
```

Appendix B: Sample copy

```
\title={Manmac BLUes}
\stitle={---how to typeset a book
          via \TeX---}
\contents={\bitem User's guide
          \bitem Coding}
%
\head Why?\par
To return to the roots...
%
\shtitle{Contents}%Extensive
\bitem Font definition
...
%
\head User's Guide\par
\subhead Chapter markup\par
\subsubhead Structure\par
\def\thepage{U\folio}\pageno=1
...                %copy proper
\nxttrs %Next transparency
\subsubhead Markup paragraphs\par
...
\continue%Continuation on next slide
...
\bye
```

Appendix C: Maintenance

This appendix is in a certain sense artificial. Introduced by the automatisms which come with my choices for the 'header'. If this format and header is adopted the following might be helpful for modifying or extending single transparencies.

```
%Additional/corrections
\nxttrs
%Context
\title={Literate Programming}
\htitle={Tools}
%Suppress title page via
%\let\head\regularhead
%Footer mods
\identification={feb94}
\def\thepage{13a}
%
\subhead FWEB\par
This LP tool is developed by John Krommes
\bye
```