

**Vertical Centering for Transparencies**

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The problem of vertical adjustment, when preparing transparencies is well known. It is very frustrating, that after some small changes, the number of lines changes and the vertical centering must be done again. In addition to this, first time users face the problem of selection of the size of letters to be used, the maximum page dimensions, which fit into a standard transparency holder, etc. Also, the question of the location of an identification on the page must be addressed.

In the following, a very simple procedure for L<sup>A</sup>T<sub>E</sub>X users is presented, which solves most of the problems related to producing transparencies. There are enough comments included to use it; here only a few pointers are given, which may be of some help.

If one wants to use the macro as is, then everything needed is done for the user. A good size bold-face character set is selected, identification with the date is produced in the footnote, and an automatic `\newpage` is provided. There is no check to see if there is enough room for the text on the page. Possibly the only parameters which require new values are the

```
\voffset \hoffset
```

which are device-specific.

As indicated on the comment lines, material for the transparency can be read in from a file with the standard `.tex` extension : in this case at least one space must be left between the name and the closing bracket (see `transpl`).

As can be seen from the examples, there is some flexibility in the usage of the macro. However if the default setting is not suitable, then the user should modify the macro to suit the requirements.

Editor's note: Following is the code used to obtain the adjoining transparencies. The driver file defines a few macros and uses `\vc` to create the centered text.

**1 Driver File**

```
%%%%%%%%%%
% Driver file defining macros and creating
% 3 transparencies.
%
\documentstyle{article}
%
```

```
\textheight=9.0truein
\textwidth=6.5truein
\topskip=0pt

\voffset=-1.0truein
\hoffset=-1.0truein

\def\bc{\begin{center}}
\def\ec{\end{center}}

\def\vc#1#2{% centering macro
  \vrule
  \vfill
  \footnotetext{%
    \large\hspace{-4mm}{#1\quad\today}}%
  }%
  {\Huge\bf#2}%
  \vfill\newpage
}

\def\thefootnote{} % to avoid footnote numbers
\pagestyle{empty} % to avoid page numbers

\begin{document}

% call the macro with two parameters as :
%
%
% \vc{#1}{#2}
%
% #1 : id, i.e. the name, title, etc., which
% goes to the bottom of the page.
% The date is supplied automatically.
%
% #2 : text for the transparency,
% including \indent, \noindent,
% \itemize, or whatever. This text
% can be put in directly, or read in
% by using : \input text where
% text.tex contains the material for
% the transparency.

% first example with defaults

\vc{Nagy : Geoid 1}{\input transpl }

% second example: the fonts are changed,
% both for the id and the text, but not
% for the title. The text is supplied
% directly.

\vc{\sc Nagy : Geoid 2}%
{\bc T R I A L \quad T E X T\ec \Large
This is a trial text to find out how
the linebreaking algorithm and other
```

special instructions may work in this arrangement. It is hoped that this text may clarify the points hidden by the fog earlier.}

```
% third example: \sl is used for id, and
% default font for text. The text is
% read from the file : transp3.tex, then
% augmented by directly putting in the
% rightflush text : FINI to the end
% of the last line.
```

```
\vc{\sl Nagy : Geoid 3}%
  {\input transp3 \unskip~\hfill FINI}
```

```
\end{document}
% End of driver file
```

## 2 TRANSP1.TEX

Following is the code contained in the file transp1.tex.

```
%%%%%%%%%%
% input file to test the \vc#1#2 macro
% transp1.tex
%
\bc GEOID COMPUTATION \ec
```

```
\vspace{10mm}
```

```
\noindent The problems related to the
computation of a gravimetric geoid for
Canada can be summarized as follows :
```

```
\vspace{5mm}
\begin{itemize}
  \item Selection of reference system
  \item Preparation of input data
  \item Computation of geoid
  \item Presentation of results
```

```
\end{itemize}
```

```
\vspace{5mm}
```

In the following, these topics will be discussed in some detail.

## 3 TRANSP3.TEX

Following is the code contained in the file transp3.tex.

```
%%%%%%%%%%
% input file to test the \vc#1#2 macro
% transp3.tex
%
\bc PRESENTATION OF RESULTS \ec
```

```
\vspace{10mm}
```

```
\noindent The Oblique Lambert Zenithal Equal
Area projection has been selected as a base
map. The followings will be shown :
```

```
\vspace{5mm}
\begin{itemize}
  \item Data distribution for
    \begin{itemize}
      \item North America, Worldwide
    \end{itemize}
  \item Satellite model
    \begin{itemize}
      \item Gravity and geoid
    \end{itemize}
  \item Gravity and residual anomaly for
    \begin{itemize}
      \item North America and Worldwide
    \end{itemize}
  \item Gravimetric geoid map
\end{itemize}
\vspace{5mm}
```

The results will be presented in various forms, such as APPLICON-map, contour-map, etc.

## **GEOID COMPUTATION**

**The problems related to the computation of a gravimetric geoid for Canada can be summarized as follows :**

- Selection of reference system**
- Preparation of input data**
- Computation of geoid**
- Presentation of results**

**In the following, these topics will be discussed in some detail.**

## TRIAL TEXT

This is a trial text to find out how the linebreaking algorithm and other special instructions may work in this arrangement. It is hoped that this text may clarify the points hidden by the fog earlier.

## PRESENTATION OF RESULTS

The Oblique Lambert Zenithal Equal Area projection has been selected as a base map. The following will be shown :

- Data distribution for
  - North America, Worldwide
- Satellite model
  - Gravity and geoid
- Gravity and residual anomaly for
  - North America and Worldwide
- Gravimetric geoid map

The results will be presented in various forms, such as APPLICON-map, contour-map, etc. FINI