Cheap Tricks for CircuiTikz.
John Kormylo

```
\whereami{node.anchor}{color}
```

```
\makeatletter
\newlength{\whereamix} \newlength{\whereamiy}
\newcommand{\whereami}[2]{ % #1 = anchor name, #2 = color
 \draw[color=#2] (#1) node{
  \setlength{\whereamix}{0.0352\pgf@x}
  \setlength{\whereamiy}{0.0352\pgf@y}
  (\strip@pt\whereamix, \strip@pt\whereamiy)
 };
}
\makeatother
```

You can use \whereami to print the (x,y) location for a node anchor. The color is used to make the answer more visible, since it will be printed on top of the anchor itself. \whereami should be used **after** a semicolon.
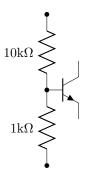
For example, one can use

```
\begin{center}
\begin{circuitikz}
 \draw (2,2) node[npn](a){};
 \whereami{a.base}{red}
 \whereami{a.emitter}{green}
 \whereami{a.collector}{blue}
 \end{circuitikz}
\end{center}
```

to get

which you can now use for things like

```
\begin{center}
\begin{circuitikz}
 \draw (2,2) node[npn]{};
 \draw (1.16,0) to[R=1k$\Omega$,*-*] (1.16,2) to[R=10k$\Omega$, -*] (1.16,4);
\end{circuitikz}
\end{center}
```
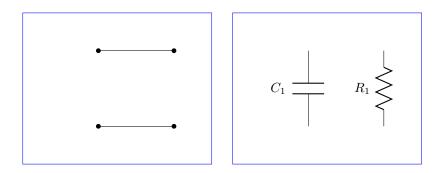
10kΩ

1kΩ

This isn't the only way to do it, and it is certainly not the best way, but it is probably the easiest.
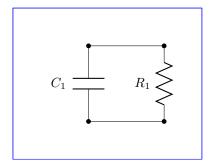
\overlay(x,y)content and \centerbox{content}

```
% Syntax: \overlay(x,y)content
% x and y are registration corrections (need units)
% content is terminated by a space or end of line, not braces.
\def\overlay(#1,#2)#3
{\noindent\makebox[\textwidth][l]{\hspace*{#1}\raisebox{#2}[0pt][0pt]{#3}
}\hspace*{-\textwidth}}

% \centerbox{content}
\newcommand{\centerbox}[1]{\makebox[\textwidth][c]{#1}}
```

\overlay gives you the ability to combine images created at different times and possibly different sources.
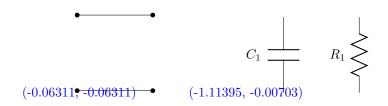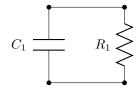

are merged to become

The idea is to create very large circuits (too large to fit into memory) in sections, then combine them. One could even turn them into encapsulated PDFs and use `\includegraphics`. This would augment or replace the Tikz layers and externalization features.

For centered images, should place a common boundary around every image so that they will wind up in the same location. Alternatively, one can use the registration offsets to move sections to where they belong. One simply needs to keep track of the relative positions of the lower left hand corners. One can do this by putting a small registration mark in the lower left hand corner of every image, or one can use

```
\whereami{current bounding box.south west}{blue}
\whereami{current bounding box.north east}{blue} % needed for centering
```

to record their locations.

which was created using

```
\overlay(1.05cm,-.06cm)\mbox{
\begin{circuitikz}
\draw (0,0) to[short, *-*] (2,0) (0,2) to[short, *-*] (2,2);
\end{circuitikz}}
\mbox{
\begin{circuitikz}
\draw (0,0) to[C=$C_1$] (0,2) (2,0) to[R=$R_1$] (2,2);
\end{circuitikz}}
```