

Beamer v3.0 with PSTricks

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Before Starting

- The **main bottleneck** from MS PowerPoint to LaTeX-based presentation tool is drawing graphics.
- Drawing objects can be done with **PGF**, **PSTricks**, or **MetaPost**.
- This PDF shows how **PSTricks** can be used with Beamer!
- However, this PDF does **not** tell you how to use Beamer nor PSTricks!

Why PSTricks

- Beamer loads **PGF** (portable graphics format).
 - PGF supports **dvips/dvipdfm/pdflatex**.¹
 - But less powerful than PSTricks or MetaPost! (e.g., data plotting)

¹But remember that Beamer does not support dvipdfm.

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 - But less powerful than PSTricks or MetaPost! (e.g., data plotting)
- **PSTricks**
 - The most powerful and easy-to-use graphics tool.
 - Seminar, (HA-)Prosper, and Beamer support it.
 - You can still use PGF with PSTricks.
 - Remember **dvips/ps2pdf** should be used!

¹But remember that Beamer does not support dvipdfm.

Beamer Options

- Pass two options, `xcolor=pst` and `dvips`, to Beamer.
- Load `pstricks` package.
- Example:

```
\documentclass[slidestop,xcolor=pst,dvips]{beamer}  
\usepackage{pstricks}           % PSTricks package
```

Compile

- Three steps are required:

```
> latex imsi.tex           % Two or more times  
> dvips -Ppdf -G0 imsi.dvi % -Poutline is also ok  
> ps2pdf imsi.ps          % Or use distiller
```

- To get **prepress** quality PDF, type 'ps2pdf -dNOPAUSE
-dPDFSETTINGS=/prepress imsi.ps imsi.pdf'²

²If '=' is not working under Windows, use '#'.

Color Definition

- You can use color definitions in `color`, `xcolor`, and `pstcol` packages.

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- Examples of `xcolor` definition:
 - `\xdefinecolor{rgb}{lavender}{0.8,0.6,1}`
 - `\xdefinecolor{cmyk}{olive}{0.64,0,0.95,0.4}`
- Examples of `pstcol` definition:
 - `\newrgbcolor{lavendar}{0.8 0.6 1}`
 - `\newcmykcolor{olive}{0.64 0 0.95 0.4}`

Color Macros




- Predefined colors in `pstcol`:
red, green, blue, cyan, magenta, yellow, black, darkgray, gray, lightgray, and `white`.
- Predefined colors in `xcolor`:
Above + orange, violet, purple, brown.
- Of course, Beamer theme colors:
`\alert{..}` and `\structure{..}`.

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`\alert{..}` and `\structure{..}`.
- Color macros
 - `\textcolor{col}{text}`
 - `{\color{col} text}`
 - `{\col text}` (only for predefined colors in `pstcol`)

Package xcolor

- Package `xcolor` provides more flexibility!
- Color mixing is very easy!
- Example with PSTricks

fillcolor	meaning	example
red		
red!70!blue	70% red + 30% blue	
-red	remove red → 30% blue	

Figures inside Columns

- Figures inside 'columns' environment need exact position.
- `\includegraphics` understands **overlay** command.

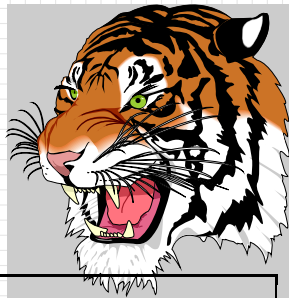
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- See the right figure
- Source code



```
\begin{columns}
  \begin{column}{0.65\textwidth}
    A\B
  \end{column}
  \begin{column}{0.35\textwidth}
    \rput[lt](0,0){\includegraphics[clip=true,width=\textwidth]{tiger}}
  \end{column}
\end{columns}
```

Manual Overlays

- PSTricks with Beamer overlays are possible.
- In the right example
`\only<i->` is used inside the
`multido` PSTricks macro.
- Ready to see?

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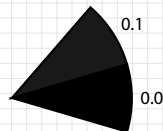
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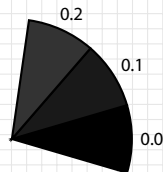
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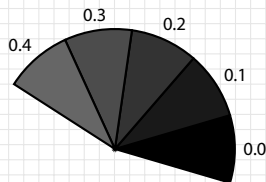
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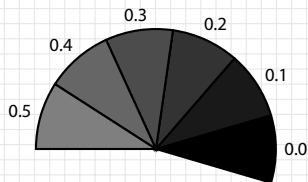
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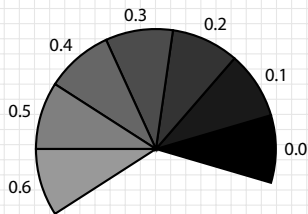
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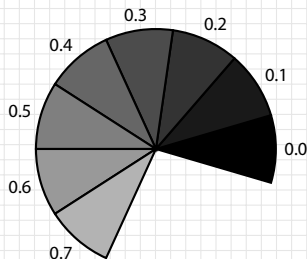
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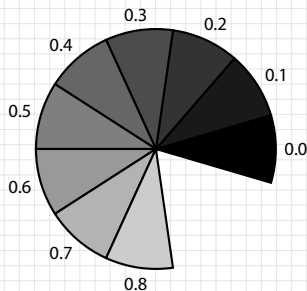
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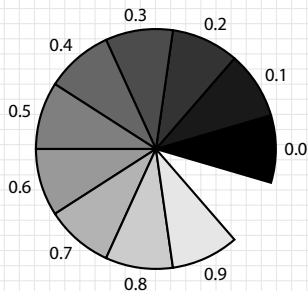
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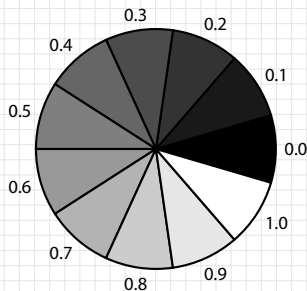
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Example:



Source Code – Overlays

```

\begin{pspicture}(-2.0,-2.0)(2.0,2.0)
  \newgray{mygray}{0}
  \SpecialCoor
  \degrees[1.1]
  \multido{\i=2+1,\n=0.0+0.1}{11}{%
    \only<\i->{%
      \newgray{mygray}{\n}
      \psset{fillstyle=solid,fillcolor=mygray}
      \rput{\n}{\pswedge{1.6}{-0.05}{0.05}}
      \uput{1.7}[\n](0,0){\scriptsize \n}%
    }%
  }%
\end{pspicture}

```

% i: overlay counter
 % n: color counter
 % end of overlay
 % end of **multido**

Automatic Overlays

- Any overlays and transitions can be automated.
- Animation methods (known to me!).
 - `Auto advancing` (timed overlay) methods.
 - `\animate` macro.
- Animation depends on your imagination and \LaTeX skill.
- Use with caution as animation consumes *lots* of slides.

Auto Advancing

- Two approaches are possible:
 - Hyperref package: `\hypersetup{pdfpageduration=n}` where n is duration time (sec).
 - Beamer option: `\transduration<i>{n}` where i is overlay counter.
⇒ ($<i>$ can be omitted for global setting).

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 - Hyperref package: `\hypersetup{pdfpageduration=n}` where n is duration time (sec).
 - Beamer option: `\transduration<i>{n}` where i is overlay counter.
⇒ ($<i>$ can be omitted for global setting).
- You need Adobe Reader setup if you use version 5.x.
 - Go to Edit → Preferences → Full Screen.
 - Select **Advance Every**, and set it to **60** in Windows or **1000** in Linux.

Auto Advancing: pdfpageduration

- Inside the current frame, add `\hypersetup{pdfpageduration=1}`.
- Inside the **next** frame, do not forget to set the value to some big value (=500).
- **Two Problems:**
 - Overlay is automatically started
 - Next slide is automatically opened!

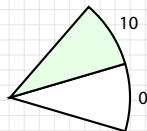
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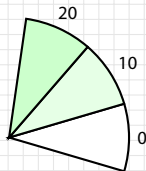
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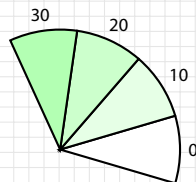
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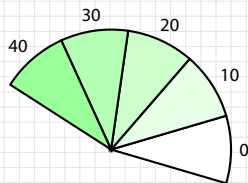
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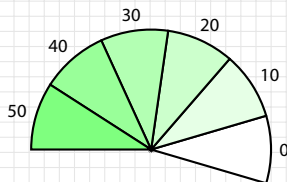
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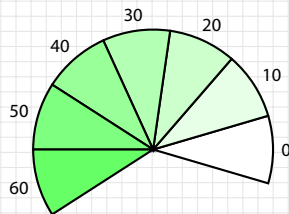
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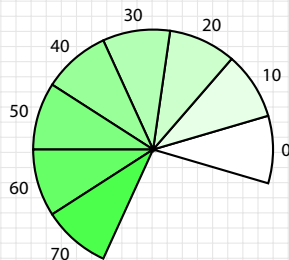
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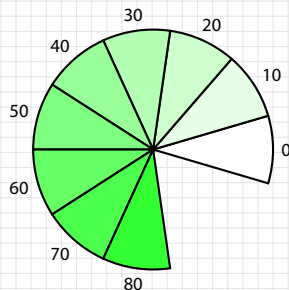
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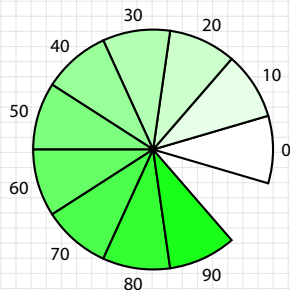
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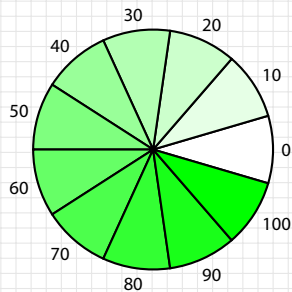
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Auto Advancing: transduration

- Beamer **transition macros** for auto advancing.
- Applied options:
 - `\transduration<2->{0.5}` ⇒
Animate next slides at every 0.5 sec.
 - `\transglitter<6>[direction=315]`
⇒ Glitter at 315 degrees.
 - `\transduration<6>{2}`.
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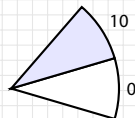
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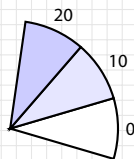
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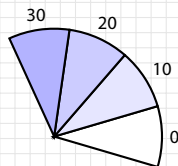
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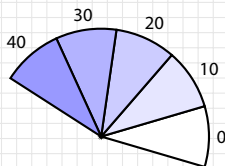
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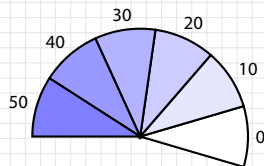
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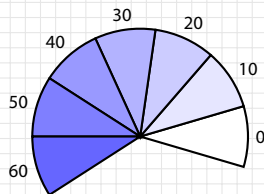
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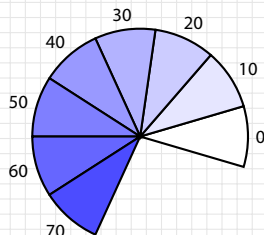
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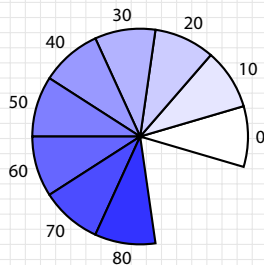
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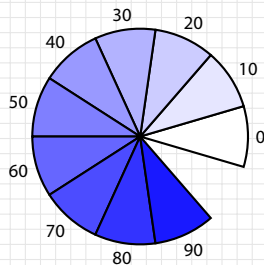
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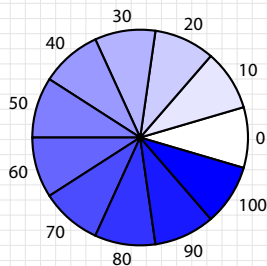
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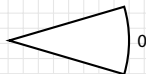


Auto Advancing: animate

- `\animate<>` shows overlays as fast as it can. So you cannot go back!
- Beamer's transition effects can be applied.
- On the 6th overlay, the following effects are added.
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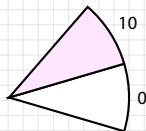
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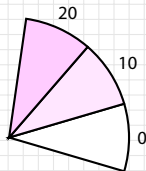
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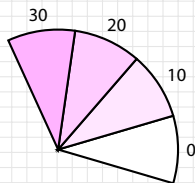
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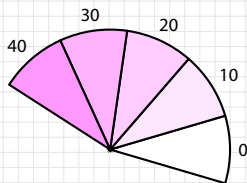
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 - `\transglitter<6>[direction=315]`
 - `\transduration<6>{2}`



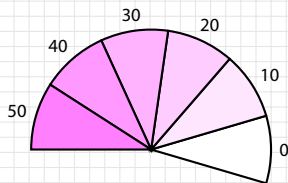
Auto Advancing: animate

- `\animate<>` shows overlays as fast as it can. So you cannot go back!
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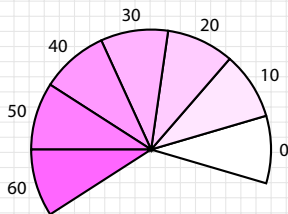
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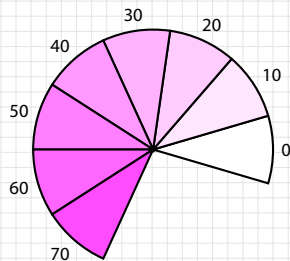
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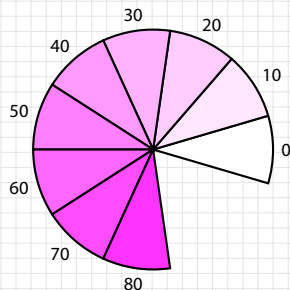
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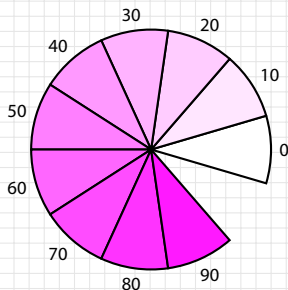
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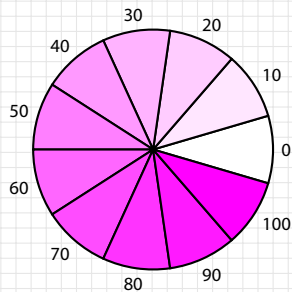
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Notes Option

- The `[notes]` option in earlier Beamer did not work with PSTricks. But now it also works with PSTricks.
- Example code:

```
\documentclass[notes]{beamer}      % notes option
\frame{\frametitle{Notes Options}  %
... slide contents ...
}%
\note{... Note contents ...}      % Notes outside \frame{...}
```

- Ready to see the note of this slide?

Beamer v3.0 with PSTricks

Notes Option

Notes Option

Notes Option

- ✓ The `[notes]` option in earlier Beamer did not work with PSTricks. But now it also works with PSTricks.

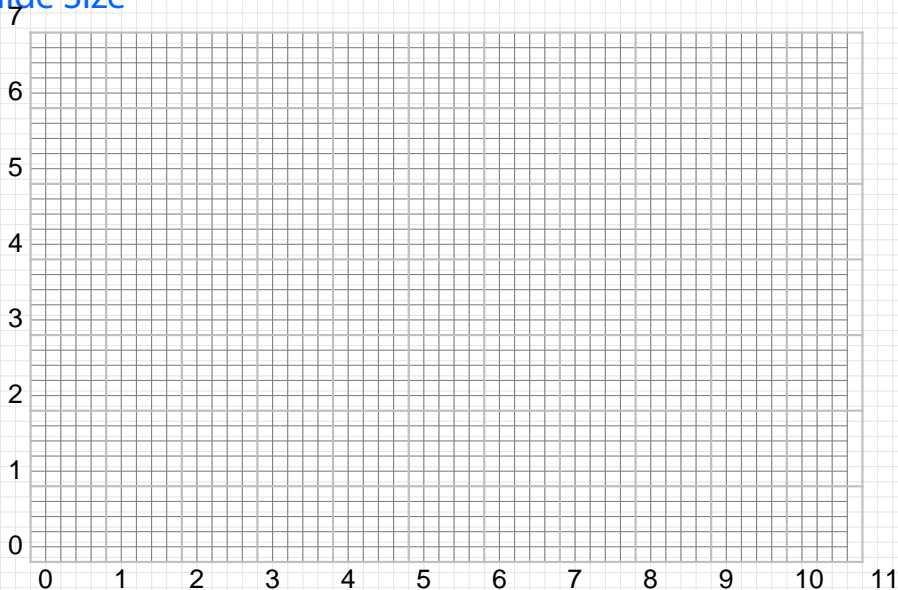
- ✓ Example code:

```
\documentclass[notes]{beamer} % notes option
\frame{frame title|Notes Options} %
... slide contents ...
\begin{frame}[... Note contents ...] % Notes subtitle \frame{...}
```

- ✓ Ready to see the note of this slide?

Can you see me now? I am the note page of the previous slide.

Slide Size



Reference



Ki-Joo Kim, *Useful \LaTeX Documents*
(<http://www.geocities.com/kijoo2000/>).



Denis Girou, *PSTricks and relative Timothy van Zandt Packages except Seminar* (<http://www.tug.org/applications/PSTricks/>).



Herbert Voss, *Package pstricks* (<http://www.pstricks.de/>).