Beamer v3.0 with PSTricks

Ki-Joo Kim

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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 MetaFont.
- 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!

---

[1] But remember that Beamer does not support dvipdfm.

Why PSTricks

- Beamer loads PGF (portable graphics format).
    - PGF supports dvips/dvipdfm/pdflatex.[1]
    - But less powerful than PSTricks or MetaPost!
- PSTricks
    - The most powerful and easy-to-use graphics tool.
    - Seminar, (HA-)Prosper, and Beamer support it.
    - You can still use PGF with PSTricks.
    - But dvips should be used!

---

[1] But 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{beamerthemeepa}        % In-house theme
\usepackage{pstricks}              % PSTricks package
```

Compile

- Three steps are required:

```
> latex imsi.tex          %
> dvips -Ppdf -GO imsi.dvi  % -Poutline is ok, too.
> ps2pdf imsi.ps          % Or use distiller
```

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

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[2] If '=' 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}

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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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- Of course, Beamer theme colors:
  \alert{..} and \structure{..}.
- Color macros
  - \textcolor{col}{text}
  - {\color{col} text}
  - {\col text}   (only for predefined colors in pstcol)

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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 $\rightarrow$ 30% blue	

Figures inside Columns

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

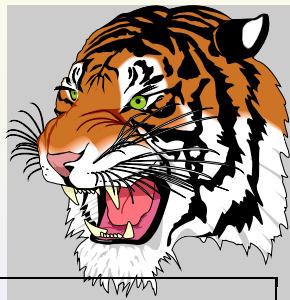# Figures inside Columns

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- See the right figure

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- \includegraphics understands overlay command.
- 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?

Example:

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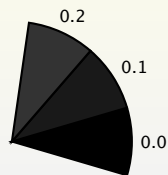
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0.0

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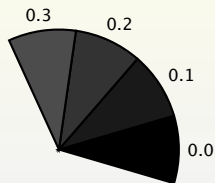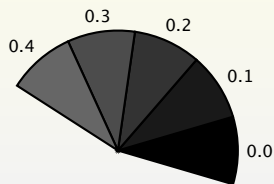- Ready to see?

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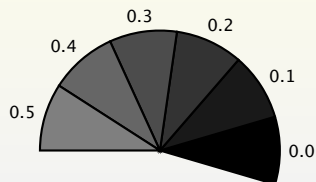- Ready to see?

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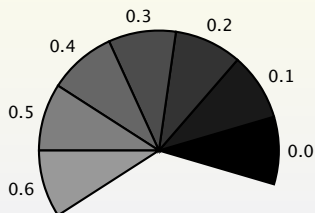- In the right example `\only<i->` is used inside the `multido` PSTricks macro.
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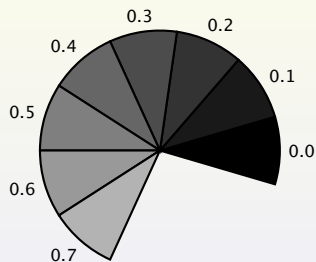- Ready to see?

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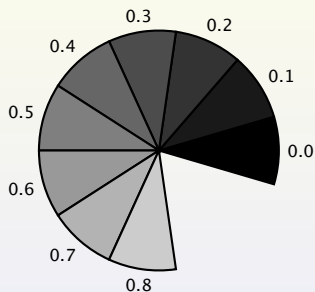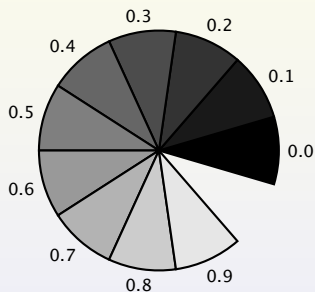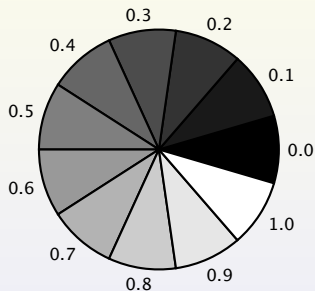
Example:

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->{%                              % i: overlay counter
      \newgray{mygray}{\n}                    % n: color counter
      \psset{fillstyle=solid,fillcolor=mygray}
      \rput{\n}{\pswedge{1.6}{-0.05}{0.05}}
      \uput{1.7}[\n](0,0){\scriptsize \n}%
    }%                                        % end of overlay
  }%                                          % end of multido
\end{pspicture}
```

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. $\Rightarrow$ (<i> can be omitted for global setting).

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. $\Rightarrow$ (`<i>` can be omitted for global setting).
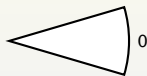- You need Adobe Reader setup if you use version 5.x.
  - Go to Edit $\rightarrow$ Preferences $\rightarrow$ Full Screen.
  - Select Advance Every, and set it to 60 in Windows or 1000 in Linux.

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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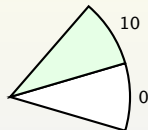 - Overlay is automatically started
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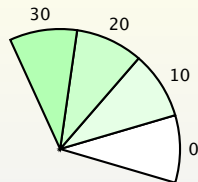 - Overlay is automatically started
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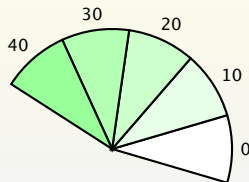 - Overlay is automatically started
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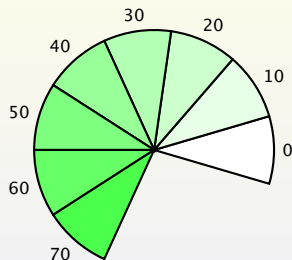 - Next slide is automatically opened!

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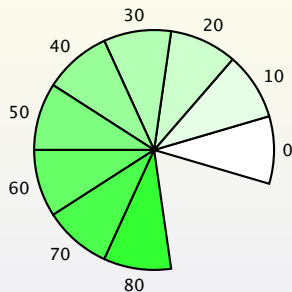 - Overlay is automatically started
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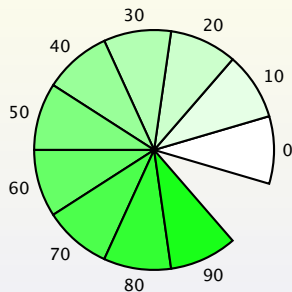 - Overlay is automatically started
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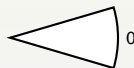 - Overlay is automatically started
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Auto Advancing: `transduration`

- Beamer transition macros for auto advancing.
- Applied options:
  - `\transduration<2->{0.5}` $\Rightarrow$ Animate next slides at every 0.5 sec.
  - `\transglitter<6>[direction=315]` $\Rightarrow$ Glitter at 315 degrees.
  - `\transduration<6>{2}`.
  - `\transduration<12>{500}` $\Rightarrow$ Big number will not automatically open next slide.
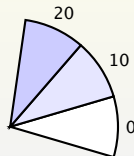
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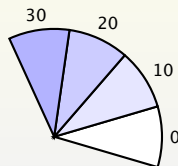   - `\transduration<12>{500}` ⇒ Big number will not automatically open next slide.
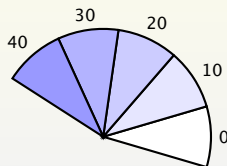
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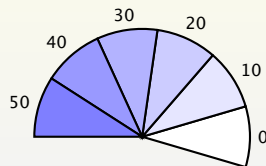 - `\transduration<12>{500}` $\Rightarrow$ Big number will not automatically open next slide.

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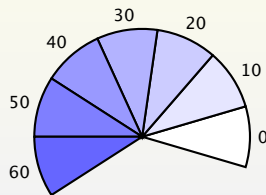 - \transduration<12>{500} ⇒ Big number will not automatically open next slide.

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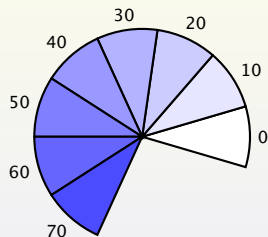 - `\transduration<12>{500}` ⇒ Big number will not automatically open next slide.

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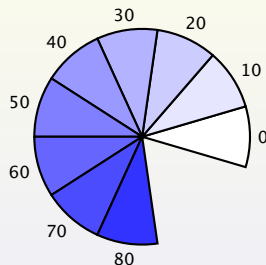
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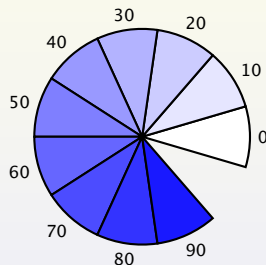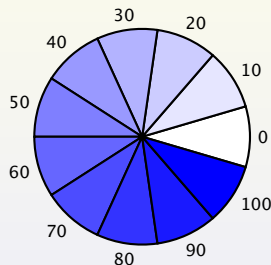 - `\transduration<12>{500}` ⇒ Big number will not automatically open next slide.

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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.
  - `\transglitter<6>[direction= 315]`
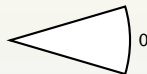 - `\transduration<6>{2}`

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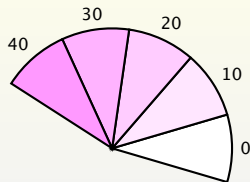 - `\transglitter<6>[direction= 315]`
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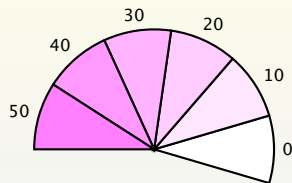   - `\transduration<6>{2}`

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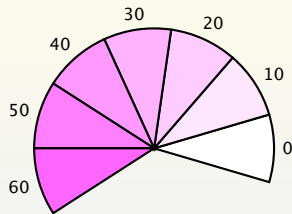 - `\transduration<6>{2}`

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  - `\transglitter<6>[direction=315]`
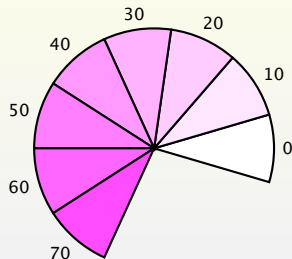 - `\transduration<6>{2}`

Auto Advancing: `animate`

- `\animate<>` shows overlays as fast as it can. So you cannot go back!
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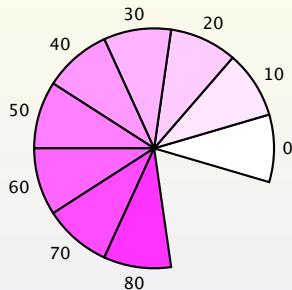   - `\transduration<6>{2}`

Ki-Joo Kim

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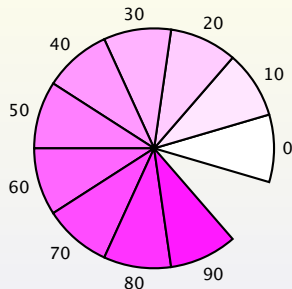   - `\transduration<6>{2}`

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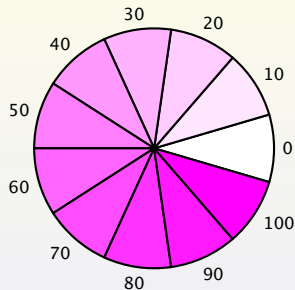 - `\transduration<6>{2}`

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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?

Notes Option

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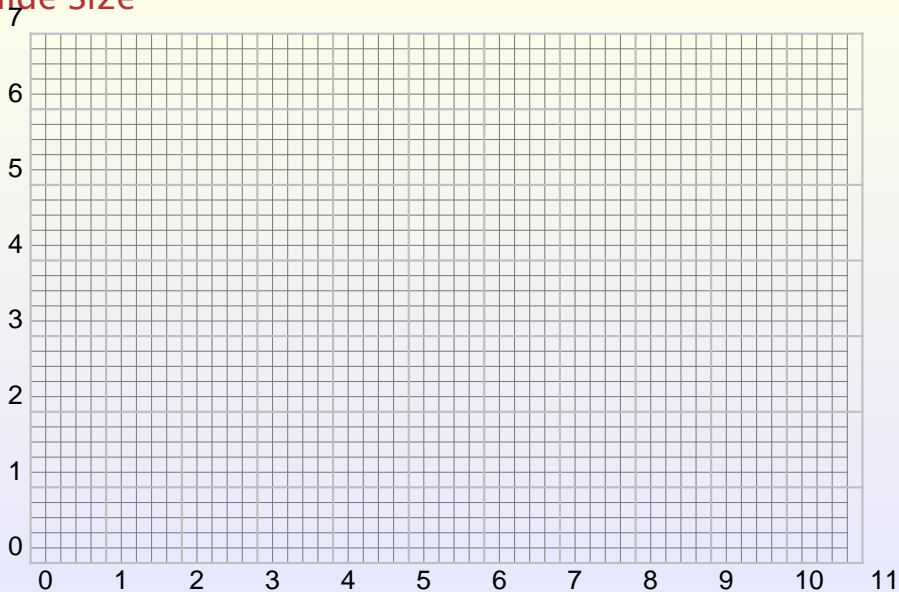- Example code:

```
\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?

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/).