Latex/PDF slideshows on Linux

Maxim Voronkov

ATNF, Narrabri

Why LaTeX/PDF presentations?

- The software is free and doesn't require Microsoft® software to run
- Easy to insert any mathematical content and figures directly from any paper or vise versa
- The source code is a plain text file. It is rather small and easy to handle
- The output PDF file is platform-independent

Why LaTeX/PDF presentations?

- The software is free and doesn't require Microsoft® software to run
- Easy to insert any mathematical content and figures directly from any paper or vise versa
- The source code is a plain text file. It is rather small and easy to handle
- The output PDF file is platform-independent

⇓

The Prosper LaTeX class is a good choice

How it works

```
\documentclass[pdf,colorBG,slideColor,darkblue]{prosper}
\title{Presentation title}
\autor{Author's name}
\institution{Author's institution}
\begin{document}
\maketitle

\begin{slide}

.... actual content ...

\end{slide}
\end{document}
```

Making PDF

- LaTeX document is compiled as usual

```
latex presentation.tex
```

makes presentation.dvi

```
dvipdf presentation.dvi
```

makes presentation.pdf, which can be viewed by Acrobat Reader®

- The following preamble command starts the presentation in the full screen viewing mode by default

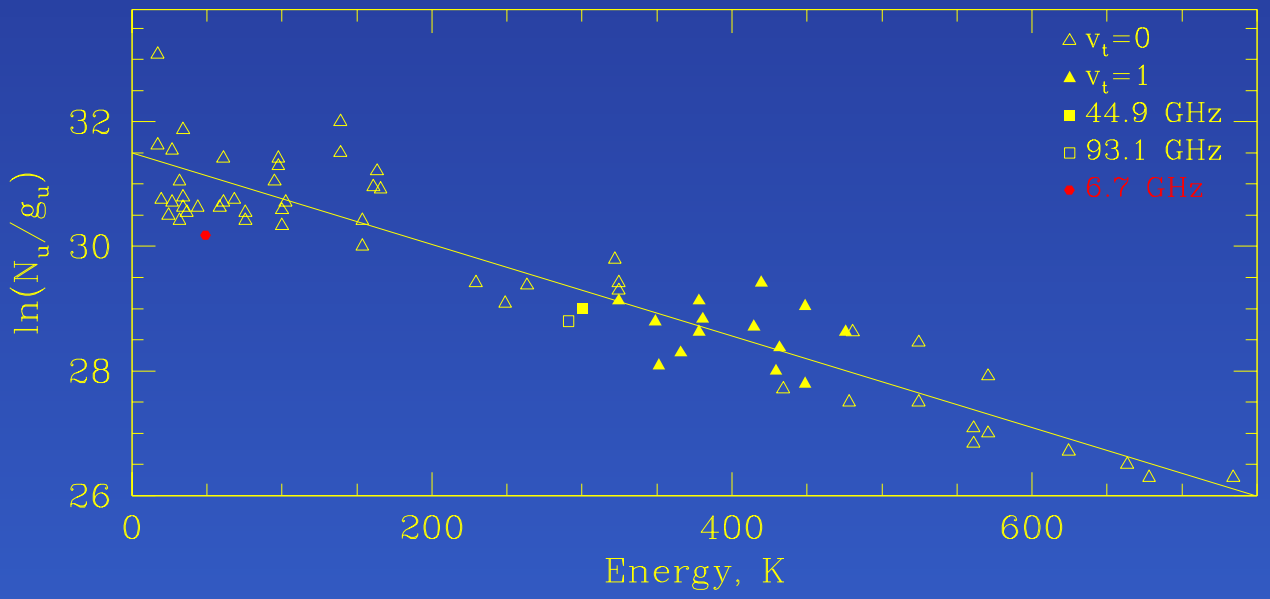
```
\hypersetup{pdfpagemode=FullScreen}
```

- Alternatively Ctrl+L can be used manually

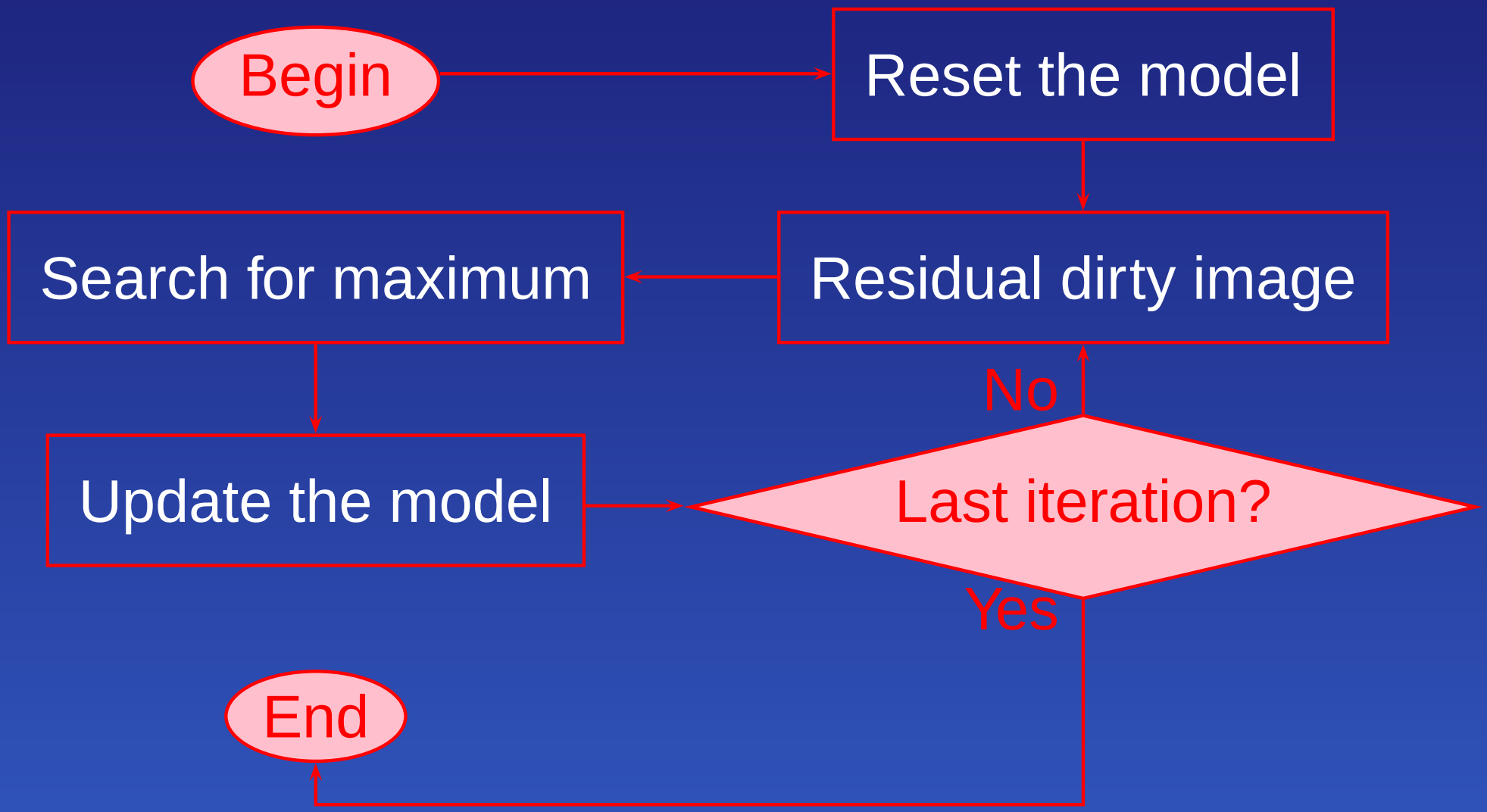
Example of content

- The content may be a formula

$$\begin{cases} \sum_k n_k \left\{ B_{kj}\overline{I} + A_{kj}\delta_{kj} + C_{kj} \right\} = n_j \sum_k \left\{ A_{jk}\delta_{jk} + B_{jk}\overline{I} + C_{jk} \right\} \\ \\ \sum_k n_k = n_{tot} \ , \quad \overline{I} = \frac{1}{4\pi} \int_0^{+\infty} f(\nu) \ d\nu \int_{4\pi} I(\nu, \Omega) \ d\Omega \end{cases}$$



PSTricks: Flow-charts



Overlays

```
\overlays{3}{
\begin{slide}

.... actual content ...

\end{slide}}
```

```
\fromSlide{2}{something}
\untilSlide{2}{something}
\onlySlide{3}{something}
\fromSlide*{2}{something}
\untilSlide*{2}{something}
\onlySlide*{3}{something}
```

- \untilSlide{3}
- \onlySlide{2}
- \fromSlide{2}

- \untilSlide*{3}
- \onlySlide*{2}
- \fromSlide*{2}

Overlays

```
\overlays{3}{
\begin{slide}

.... actual content ...

\end{slide}}
```

```
\fromSlide{2}{something}
\untilSlide{2}{something}
\onlySlide{3}{something}
\fromSlide*{2}{something}
\untilSlide*{2}{something}
\onlySlide*{3}{something}
```

- \untilSlide{3}

- \untilSlide*{3}

Overlays

```
\overlays{3}{
\begin{slide}

.... actual content ...

\end{slide}}
```

```
\fromSlide{2}{something}
\untilSlide{2}{something}
\onlySlide{3}{something}
\fromSlide*{2}{something}
\untilSlide*{2}{something}
\onlySlide*{3}{something}
```

- \untilSlide{3}
- \onlySlide{2}
- \fromSlide{2}

- \untilSlide*{3}
- \onlySlide*{2}
- \fromSlide*{2}

Overlays

```
\overlays{3}{
\begin{slide}

.... actual content ...

\end{slide}}
```

```
\fromSlide{2}{something}
\untilSlide{2}{something}
\onlySlide{3}{something}
\fromSlide*{2}{something}
\untilSlide*{2}{something}
\onlySlide*{3}{something}
```

- \untilSlide{3}
- \fromSlide{2}

- \untilSlide*{3}
- \fromSlide*{2}

Overlays and PSTricks

The Householder formula below lets you compute $f^{-1}(x)$ for an arbitrary f.

$$x_{k+1} \mapsto \Phi_n(x_k) = x_k + (n-1)\frac{\left(\frac{1}{f(x_k)}\right)^{n-2}}{\left(\frac{1}{f(x_k)}\right)^{n-1}} + f(x_k)^{n+1} \quad \psi \qquad (1)$$

Overlays and PSTricks

The Householder formula below lets you compute $f^{-1}(x)$ for an arbitrary f.

$$x_{k+1} \mapsto \Phi_n(x_k) = x_k + (n-1)\frac{\left(\frac{1}{f(x_k)}\right)^{n-2}}{\left(\frac{1}{f(x_k)}\right)^{n-1}} + f(x_k)^{n+1}\,\psi \qquad (1)$$

where $n \geq 2$ and ψ is an arbitrary function.

Overlays and PSTricks

The Householder formula below lets you compute $f^{-1}(x)$ for an arbitrary f.

$$x_{k+1} \mapsto \Phi_n(x_k) = x_k + (n-1)\frac{\left(\frac{1}{f(x_k)}\right)^{n-2}}{\left(\frac{1}{f(x_k)}\right)^{n-1}} + f(x_k)^{n+1}\,\psi \qquad (1)$$

where $n \geq 2$ and ψ is an arbitrary function.

Formula (1) gives an iteration of order n converging towards x_* such that: $f(x_*) = 0$.

Mark ends with \rnode{NA} and \rnode{NB}, then \nccurve[linecolor=red,angleA=90,angleB=270]{->}{NB}{NA}

Other features

- There are several ways of transition between different slides

This behavior can be configured by setting the optional parameter

```
\begin{slide}[Dissolve]{Other features}
```

- External program can be started

```
\href{run:mymovie.mpg}{Play the movie}
```

The .mailcap file should contain an association

```
video/mpg;mplayer %s
```

Summary

- The Prosper class is an easy and efficient way to create LaTeX/PDF presentations under Linux
- The presentation can be played at any platform, which has the Acrobat Reader®
- The software is free and can be downloaded from http://prosper.sourceforge.net along with examples
- More sofisticated examples and styles are available in the Internet on various sites (type Prosper in Google)