Waveoptics

FYS2150 Lab Report

Nicholas Karlsen

September 3, 2018

Abstract

This is a simple sample of a document created using LaTeX(specifically pdflatex) that includes a figure from the Vergil visual editor for Ptolemy II that was created by printing to the Acrobat Distiller to get a PDF file. It also illustrates a simple two-column conference paper style, and use of bibtex to handle bibligraphies.

1 Using LaTeXwith PDF Figures

This is a sample document for use with pdflatex, which is a program that is included with the Miktex distribution that directly produces PDF files from LaTeXsources. To run LaTeXon this file, you need the following files:

1. templatePDF.tex (this file)
2. figure.pdf (the figure file)
3. simpleConference.sty (style file)
4. refs.bib (bibiliography file)

To create a PDF file, execute the following commands:

1. pdflatex templatePDF
2. bibtex templatePDF
3. pdflatex templatePDF
4. pdflatex templatePDF

Yes (strangely) it is necessary to run pdflatex three times. The result will be a PDF file (plus several other files that LaTeXproduces). You will need a mechanism, of course, for executing commands on the command line. If you are using Windows, I recommend installing Cygwin and using its bash shell.

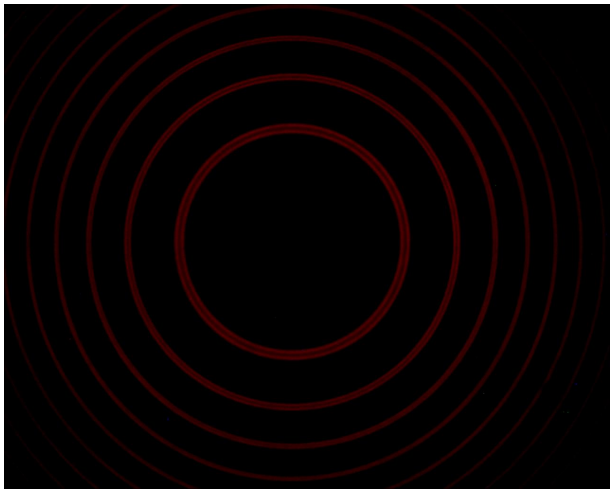

Figure 1: Figure caption. To get a figure to span two columns, use the environment figure* rather than figure.

2 How to Include Vergil Diagrams as Figures

Suppose you wish to include a figure, like that in figure 1. The simplest mechanism is to install Adobe Acrobat, which includes a "printer" called "Acrobat Distiller." Printing to this printer creates a PDF file, which can be included in a document as shown here. To include Ptolemy

II models [**?**], just print to the distiller from within Vergil and reference the PDF file in your LaTeXdocument.

There is a bit more work to do, however. The file that is produced by the distiller represents a complete page, not the individual figure. You can open it in using Acrobat (version 5.0 or later), and select Document → Crop Pages from the menu. In the resulting dialog, check "Remove White Margins." Save the modified PDF file in a file and then reference it in the LaTeXfile as shown in this example.

An alternative is to generate EPS (encapsulated postscript), but the process is much more complex and fragile. I recommend using pdflatex and Adobe Acrobat.

References