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Circuitos Elétricos 2 - Prof. Ícaro dos Santos

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Resumo

$x^2 + y^2 = 1$ This document focuses on the set-up and basic use of the circuit_macros package by J. D. Aplevich, enabling the users to embed high-quality circuits into their LaTeX documents. More specifically, this note focuses in the setup in the Mac OS X system, which has became very popular among engineering students in the last few years.

1 Introduction

For many of us, LaTeX is the holy grail of document production - not only does it make our lives easier, it also makes it possible to produce very high quality documents without much effort.

Yet, LaTeX still has some gaps to fill in - for professionals and students in the field of Electrical Engineering, the necessity of circuit representation has been long filled either with unprofessional and improvised solutions, such as using CAD software to produce the desired representation of the circuit, or reling in proprietary (and often expensive) software to do the same in a rather professional matter.

Circuit_macros basically fills the gap. It gives you all of the benefits (and drawbacks) of LaTeX for circuit representation. Some very professional results can be obtained with a little bit of practice, and combined with the power of LaTeX it can very well be the ultimate solution for electrical engineers looking to produce very high quality documents. More info can be found in J. D. Aplevich's (the creator and maintainer of circuit_macros), `http://www.ece.uwaterloo.ca/~aplevich/Circuit_macros/`.

The idea of this document is to setup the circuit_macros in the Mac OS X operational system, which is becoming increasingly popular among college students and professionals alike. We assume the basic LaTeX system has been setup, if not, check out the MacTeX distribution (`http://www.tug.org/mactex/`). MacTeX is probably the most user-friendly way of getting LaTeX up and running in your mac. This document was written with Mac OS X 10.5 in mind, with circuit_macros 6.5 and MacTex installed - however, it shouldn't differ much from other configurations.

2 Installation

2.1 Getting the latest Circuit_macros package

The first step is to grab the latest version of Circuit_macros. In this example, we will be using version 6.5.

The latest version of the circuit_macros package can be found in the TeX Users Group home page, `http://www.tug.org/`, more specifically, at `http://www.ctan.org/tex-archive/graphics/circuit_macros/`. You can also grab it directly from the author's website, `http://www.ece.uwaterloo.ca/~aplevich/Circuit_macros/`. However, keep in mind the the TeXUsers Group homepage should always have the latest official stable version. While you are at it, you might want to grab `dpic` as well - it can be found in the author's website as well.

Once you had the files downloaded, go ahead and unzip them (if the OS hasn't done that already for you). We unzipped our example in the Downloads folder.

2.2 dpic's installation

The installation of circuit_macros involves quite a bit of command line (terminal), however, most LaTeX users shouldn't have much trouble with it. Also keep in mind that, at least for this tutorial, we have chosen to keep a command line approach, so every time you will need to use to command line to integrate generate the file to be included in your LaTeX document.

Our first step is to install `dpic`, which is one of the necessary programs for circuit_macros. For information on it, check out documentation on both `dpic` and circuit_macros.