Using LaTeX to Create Documents

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Abstract

This document extends a previous paper on creating LaTeX documents. Examples are provided within the text of the paper, but the reader can also view the source code for further clarity. This paper was designed to create a web page version to post on the Internet.

1 Introduction

LaTeX is a text formatting program that is extensively used to produce scientific journals, textbooks, and many other publications. The software is able to take irregular blocks of text with embedded commands, and assemble a device independent file that can be displayed on a computer screen or sent to a printer.

Similar to HTML tags used for the World Wide Web, LaTeX commands direct the program to produce a formatted document including graphics. Some of the formatting may seem more difficult than HTML, but the richness available in LaTeX is amazing including mathematical
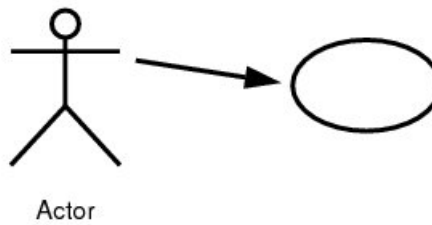
Figure 1: An actor and use case

symbols and even a separate tag for software's own name (\LaTeX). As of now, LaTeX remains a standard for document presentation in many scientific communities.

2 Some LaTeX Basics

There are some basic principles of LaTeX that can help a person organize a research paper. These will be described in more detail in each subsection below with code examples for reference.

2.1 Document Header or Preamble

The preamble of a LaTeX document contains a number of global parameters that will control the entire document. It is similar to a Cascading Style Sheet in HTML.

Above is a figure exported from dia to eps, then converted to .jpg. Compilation is done with pdflatex. The original image from dia needed to be cropped using Gimp, and resaved as jpg. (The original image had a large amount of white space at the bottom) Here's a second
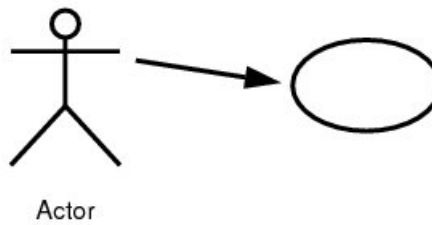
Figure 2: The SAME actor and use case

figure demonstration!

References

[1] John December and Neil Randall, <u>The World Wide Web Unleashed</u>, Sams Publishing, 1994.

[2] Helmut Kopka and Patrick W. Daly, <u>A Guide to LATEX</u>, Addison-Wesley Publishing Co., Inc., 1993.

[3] Nikos Drakos and Ross Moore, <u>LaTeX2HTML Translator</u> Version 99.2 beta8(1.43), Macquarie University, Sydney, 1999.

[4] Walker, Janice R. et al., "The Columbia Guide to Online Style", 1995.

http://www.columbia.edu/cu/cup/cgos/idx_basic.html (August 11, 2000)