Electronic Notes in Theoretical Computer Science XX (2000)
URL: `http://www.elsevier.nl/locate/entcs/volumeXX.html`

An Example Paper

My Name [1,2]

My Department
My University
My City, My Country

My Co-author [3]

My Co-author's Department
My Co-author's University
My Co-author's City, My Co-author's Country

Abstract

This is a short example to show the basics of using the ENTCS style macro files. Ample examples of how files should look may be found on the ENTCS Home Page `http://www.elsevier.nl/locate/entcs`.

1 Introduction

This short note provides a guide to using the ENTCS macro package for preparing papers for publication in your conference *Proceedings*. The *Proceedings* may be printed and hard copies distributed to participants at the meeting; this is an option to Conference Organizers may choose to exercise. The *Proceedings* also will be a volume in the series *Electronic Notes in Theoretical Computer Science* (ENTCS), which is published under the auspices of Elsevier Science B. V., the publishers of *Theoretical Computer Science*.

The ENTCS macro package consists of two files:

`entcs.cls`, the basic style file, and

`entcsmacro.sty`, a macro file containing the definitions of some of the theorem-like environments and a few other tidbits.

[1] Thanks to everyone who should be thanked

[2] Email: `myuserid@mydept.myinst.myedu`
[3] Email: `couserid@codept.coinst.coedu`

Additional macro files can be added using `\usepackage{...}`. The file `entcs-macro.sty` *must* be included in the list, as is done at the start of the source file for this paper.

The formatting these style files impose should *not* be altered – the reason for using them is to attain a uniform format for all papers in the *Proceedings* of which your paper is a part.

The file `instraut.dvi` contains information about the macro package `elsart.sty` and `elsart12.sty`, from which the files `entcs.sty` and `entcs12.sty` are derived. Reading this file should answer most of the basic questions that might arise. It also gives some basic rules about using the macro package.

2 Frontmatter

The biggest difference between a "usual" LaTeX style such as `article.sty` and the ENTCS package is that the ENTCS macro package requires the title, author's name or names, abstract and "thanks" all to be included within the `frontmatter` environment. At the beginning of the source file for this paper, you'll notice this. Also, you'll notice that the usual `\maketitle` is absent; it no longer is needed. The ENTCS style package automatically generates the title, author's name and address, and related material at the beginning of the paper.

The ENTCS macro package provides two alternatives to listing authors names and addresses. These are described in detail in the file `instraut.dvi`. Basically, listing each author and his or her address in turn, is the simplest method. But, if there are several authors and two or more share the same address (but not all authors are at this address), then the method of listing authors first, and then the addresses, and of referencing addresses to authors should be used.

Also, notice that acknowledgment of support (the contents of `\thanks`) should be done by a separate listing of `\thanks[NSF]{To the NSF}` with the optional argument – `[NSF]` – being used for `\thanksref` which is attached to those authors acknowledging such support. It is important that the `\thanks` not be included within the scope of `\author{}` or of `\title{}`, but it must be within the scope of the environment `frontmatter`.

More details about added terms such as `\collab` can be found in `inst.dvi`, if they are needed.

Also, notice that the command `\lastname{My Lastname}` has been included *before* the `frontmatter` begins. This command should contain the last names of the authors of the paper. If there are no more than three authors, then they should be listed with the word "and" between the last two; if more than three authors collaborated on the paper, then the first author only should be listed, together with `\emph{et al}`. This command creates the headline for each page after page 1.

Finally, please be sure to include an abstract for your paper.

3 Sectioning and Environments

Since ENTCS is published through the auspices of Elsevier Science B. V., their style files have been used to create the ENTCS macro package. Here's a proof that this package is not much different than most of the ones one encounters:

Definition 3.1 A file is *derived* from another if it is obtained with only a few modifications from the original file.

Theorem 3.2 *The file* `entcs.cls` *is derived from* `elsart.sty`.

Proof. This is clear from the similarity of the output to the output from Elsevier's style files. □

If one wants to start a proof with a descriptive word, such as "sketch", then one can use the `\begin{proof*}...\end{proof*}` environment, as in

Proof (Sketch) This can be derived from simple observations. □

The main differences between the file `entcs.cls` and the ones created by Elsevier are the more precise format we use – Elsevier's generic files are meant for preliminary editing, and more precise formatting is imposed using a macro file designed for the specific Elsevier journal in which the paper will eventually appear. The `entcs.cls` and `entcsmacro.sty` files format papers uniformly so that they all are easily recognizable as being from the series *Electronic Notes in Theoretical Computer Science*.

All of the usual features of LaTeX are available with these style files – it is only the formatting that has been rigorously defined. Thus, one has available the sectioning commands `\section,\subsection, \paragraph` and `\subparagraph`. The numbering scheme used is one under which Theorem 1.2.3 is the third numbered item in second subsection of the first section of the paper. In order to facilitate cross-references, all of the named environments given below are numbered, and all use the same number scheme.

The file `entcsmacro.sty` contains additional information that is needed to typeset a paper. It also has the definitions of the $\mathcal{AMS}$ `euler` and `blackboard bold` fonts builtin. If you want to use symbols for the natural numbers, the reals, etc., then we prefer that you use the blackboard bold fonts, and not plain bold fonts. This is accomplished by using the `\mathbb` font, as in $\mathbb{N}$ or $\mathbb{R}$.

The names of theorem-like environments are provided in `entcsmacro.sty`. With the exception of the environment Algorithm, the names of all of these are full name, rather than a shortened version. The environments provided and their names are

- `\begin{theorem} ... \end{theorem}` for Theorems,
- `\begin{lemma} ... \end{lemma}` for Lemmas,
- `\begin{corollary} ... \end{corollary}` for Corollaries,

- `\begin{proposition} ... \end{proposition}` for Propositions,
- `\begin{criterion} ... \end{criterion}` for Criteria,
- `\begin{alg} ... \end{alg}` for Algorithms,
- `\begin{definition} ... \end{definition}` for Definitions,
- `\begin{conjecture} ... \end{conjecture}` for Conjectures,
- `\begin{example} ... \end{example}` for Examples,
- `\begin{problem} ... \end{problem}` for Problems,
- `\begin{remark} ... \end{remark}` for Remarks,
- `\begin{note} ... \end{note}` for Notes,
- `\begin{claim} ... \end{claim}` for Claims,
- `\begin{summary} ... \end{summary}` for Summary,
- `\begin{case} ... \end{case}` for Cases, and
- `\begin{ack} ... \end{ack}` for Acknowledgements.

For example,

Algorithm 1 *Step 1: Write the paper*
Step 2: Format it with the ENTCS macro package
Step 3: Ship the whole thing to the Guest Editors

4 References and Cross-references

All the cross-referencing facilities of LaTeX are supported, so one can use `\ref{}` and `\cite{}` for cross-references within the paper and for references to bibliographic items. As is done in this note, the **References** section 6 can be composed with `\begin{thebibliography}...\end{thebibliography}`. Alternatively, BibTeX can be used to compile the bibliography. Whichever one is used, the references are to be numbered consecutively, rather than by author-defined acronyms. Of course you can use your own acronyms for easy reference to each of the items in the bibliography, as has been done with the listing for this short note.

However, note that the references should *not* be started with a new `\section` command.

The package `hyperref` is automatically loaded by entcs.cls, and this makes all the cross-references within the document "active" when the file is viewed with `xdvi`. The format for including a link is simple: simply insert `\href{URL} {text}` where *URL* is the URL to which you want the link to point, and *text* is the text you want to be highlighted, which when clicked upon will bring up the desired web page. LaTeX appears to have problems dealing with the cross-references embedded within the `frontmatter` section, but the complaints appear to be harmless, and simply pushing LaTeX to run through them appears to work. We are working on the problem – if some LaTeXpert figures out how to cure it (other than the *unacceptable* method of disabling `hyperref`), we would appreciate hearing about it.

4.1 Particulars about `.pdf` files

In addition to PostScript© files of final versions of papers appearing ENTCS, we also require that `.pdf` files be provided for publication online. A `.pdf` file is viewable by Adobe's Acrobat© viewer, which can be configured to load automatically within a browser. Viewing a properly formatted `.pdf` file with Acrobat© allows the cross-references and links to URLs to be active. In fact, we have decided to utilize `.pdf` files in order to take better advantage of the web's capabilities. There are two methods for producing `.pdf` files.

The `DVIPDFM` utility

Probably the easiest method for producing acceptable `.pdf` files is via the utility `dvipdfm`. This utility is included in distributions of MikTeX, which runs on Windows machines, but it probably needs to be added to your teTeX distribution, if you are running LaTeX on a UNIX machine. The utility and precise information about installing it on your system can be found at the web page `http://gaspra.kettering.edu/dvipdfm/`. In essence, this utility converts a `.dvi` file into a `.pdf` file. So, one can first prepare the `.dvi` file using LaTeX, and then apply the utility dvipdfm to produce the needed `.pdf` file.[4] This utility makes inclusion of graphics particularly simple – those that are included in the LaTeX source file are simply converted to the `.pdf` format. As we note below, things are not so simple with the second alternative, which is to use pdfLaTeX.

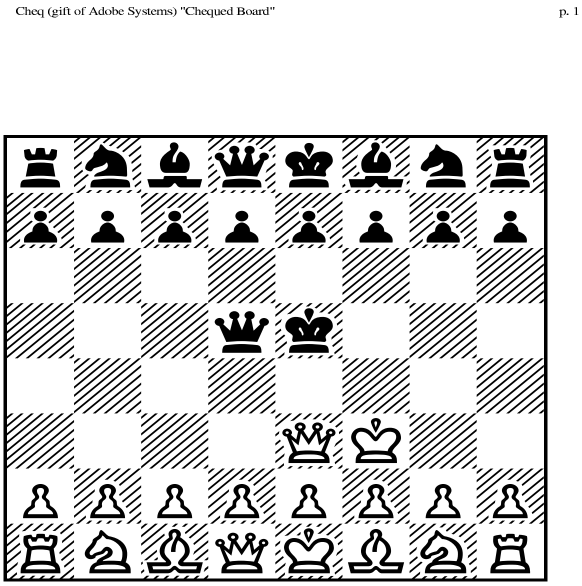
pdfLaTeX

An alternative to using `dvipdfm` to produce `.pdf` files is to process the source file with pdfLaTeX. This format is available from the standard CTAN sites `http://www.ctan.org`. It appears that pdfLaTeX and `hyperref` have some problems when used together. It is necessary to use pdfLaTeX version 14d or later in order to minimize these issues. If your system has an earlier version (most teTeX distributions have version 13d), then you can update your system by retrieving the latest version of pdfLaTeX from `ftp://ftp.cstug.cz/pub/tex/local/cstug/thanh/pdftex/`. Even if the recent versions are used, pdfLaTeX has the same dealing with references embedded with the `frontmatter` section described above for LaTeX.

[4] *Beware*! The utility `dvipdf` does *not* produce acceptable `.pdf` files, and should not be used. Only `dvipdfm` should be used to produce `.pdf` files.

There is one aspect of using pdfLaTeX that bears mention. Many authors want to include EPS[5] files within their papers. While this is fairly straightforward with LaTeX, there are a couple of points to note when attempting this with pdfLaTeX.

To include a PostScript image in a `.pdf` file produced with pdfLaTeX, you first have to convert the image to a `.pdf` file, and then it can be included using the same command sequence as above. The conversion can be accomplished most easily using Ghostscript; you can simply view the file in Ghostview and then print the image to a `.pdf` file using the `pdfwriter` option within Ghostview. The result for a standard chess board that is part of the Ghostview distribution is the following image:



Here as well is a copy of a color image. While pdfLaTeX can handle image files in other formats, LaTeX can only handle `.eps` images reliably.

[5] EPS stands for *embedded PostScript*, which affords a mechanism for including pre-prepared PostScript files within a LaTeX document.

It also should be noted that you need to have two separate source files – one for LaTeX and one for pdfLaTeX – *only* in case you wish to insert graphics images in your final paper. If your paper does not include such images, then the same source file can be formatted by both LaTeX and by pdfLaTeX.

Some versions of `xdvi` can view PostScript files, but often it is necessary to convert the `.dvi` file to a PostScript file in order to view such images. Even for those versions of `xdvi` that support embedded PostScript images, the files themselves are binary, and hence can suffer corruption when transferred over the net. Moreover, Ghostview does not support active links at this time, so the advantages of the `hyperref` package are lost in this case. This explains why we are moving to `.pdf` files for ENTCS.

5 Summary

The ENTCS macro package should be easy to use and should provide a uniform layout for all the papers in the Proceedings.

Problem 5.1 *Finish your paper and get it to your Program Chairman on time!*

When you have finished preparing your paper, send a copy of the *source file*, together with any macro files that are needed to your Program Chairman. If the files are extensive, you can place copies in the `pub/incoming` sub-directory of the ftp directory on the machine indicated by your Program Chairman using anonymous ftp. If you do this, please send me email to alert me that the file(s) are here.

6 Bibliographical references

ENTCS employs the `plain` style of bibliographic references in which references are listed in alphabetical order, according the the first author's last name, and are sequentially numbered. Please utilize this style. We have a BibTEX style file, for those who wish to use it. It is the file `entcs.bst` which can be found in the directory containing the macro files for ENTCS. The basic rules we have employed are the following:

- Authors' names should be listed in alphabetical order, with the first author's last name being the first listing, followed by the author's initials or first name, and with the other authors names listed as *first name, last name*.
- Titles of articles in journals should be in *emphasized* type.
- Titles of books, monographs, etc. should be in quotations.
- Journal names should be in plain roman type.
- Journal volume numbers should be in boldface type, with the year of publication immediately following in roman type, and enclosed in parentheses.
- References to URLs on the net should be "active" and the URL itself should be in typewriter font.
- Articles should include page numbers.

These are illustrated in the following.

References

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[5] Roscoe, A. W., "The Theory and Practice of Concurrency," Prentice Hall Series in Computer Science, Prentice Hall Publishers, London, New York (1198), 565pp. With associated web site `http://www.comlab.ox.ac.uk/oucl/publications/books/concurrency/`.

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[7] Weyl, H., "The Classical Groups," 2nd Ed., Princeton U. Press, Princeton, N.J., 1946.