

Guidelines for the preparation of ECMWF Proceedings with (pdf)L^AT_EX

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ABSTRACT

This paper describes how to produce articles for Seminar/Workshop proceedings with (pdf)L^AT_EX using the proceeding.cls class file.

1 Introduction

ECMWF is aiming at making as many publications as possible available on its public and Member States Web server. PDF¹ seems to be a suitable format for that task. It is easy to create using standard text processing tools, displays and prints similarly, uses file compression, offers exceptional print quality, allows interactive content etc. The tool to read and print a PDF document, Adobe Acrobat Reader (acroread), is freely available on all common platforms.

Similarly L^AT_EX offers some advantages over other text processing tools (see [Goossens and Rahtz, 1999](#)). Many authors are submitting their papers to journals, conferences etc. as L^AT_EX files.

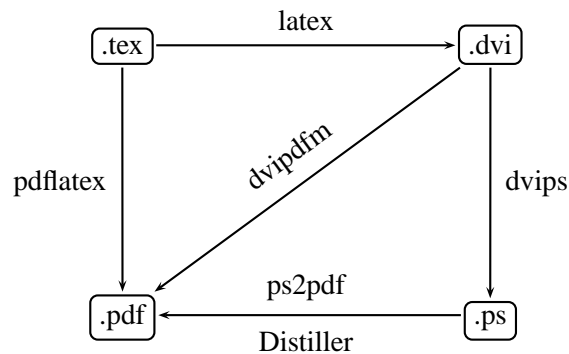


Figure 1: How to create PDF format from a L^AT_EX input file.

From the various ways shown in Figure 1 we will focus here on two ways to produce a contribution to ECMWF proceedings in PDF format with L^AT_EX:

- .tex → .dvi → .ps → .pdf
- .tex → .pdf

The direct route from .tex to .pdf via pdflatex should be preferred (unless you cannot easily produce pdf graphic files to be included in your document, see section 5).

¹Adobe's Portable Document Format, originally developed for the U.S. Federal Government to store its legacy files

The `proceeding.cls` class file described in this memo can be used to produce ECMWF Workshop Proceedings easily from your already existing Latex files. PDF files can be directly produced from latex input files using the compiler `pdflatex` instead of `latex`.

2 Submission

In addition to your printed copy of your presentation a file copy should be provided either on diskette, ftp, or via email to e.kooij@ecmwf.int. Documents must be provided in L^AT_EX, Word or FrameMaker format and will be re-formatted at ECMWF. An ftp-site has been created where files can be copied for presentations (PowerPoint documents) and proceeding contributions:

```
ftp.ecmwf.int
user> workshop
pwd> raina22
```

Here you need to change directory to presentation or proceeding where you can upload your files.

After uploading any files please email e.kooij@ecmwf.int to confirm the transfer.

3 Basic layout and style guidelines

Camera-ready texts submitted for ECMWF reports must be printed single-sided on A4 paper. All figures and graphs should be inserted in their final position in the text. *The text will not undergo any correction or revision.* All authors are requested to conform strictly to the following guidelines in order to ensure a consistent format of the publication. Note that this handout is produced according to the required format.

Item	Font	Style	Size (pt)
title	Helvetica	bold	16
author	Times Roman	bold	14
affiliation	Times Roman	italic	12
normal text	Times Roman	normal	11
abstract	Times Roman	normal	10
1. level heading	Times Roman	bold	14
2. level heading	Times Roman	bold	12
3. level heading	Times Roman	italic	12
header	Times Roman	Small Capitals	11
footer	Times Roman	normal	11

Table 1: Recommended font style and size for various text items.

3.1 Page layout

The text should be set for A4 paper format. There should be a margin of 20 mm all around the text (including running header and footer).

The use of a Times Roman font is recommended. Normal text is printed in 11 pt font size with 1.2 line spacing.

The Header should be typed centered in 11 pt Times Roman Small Capitals and contain: AuthorLastname, Initial: Title_of_article. If there is more than one author, abbreviate the authors as 'First Author et al.'. The footer (page number) is centered and typed in 11 pt Times Roman.

3.2 Affiliation

The author's postal address should be printed in 2 lines. A third line for the author's email address is optional.

3.3 Abstract

An abstract, limited to one paragraph or 250 words, which summarizes the content of the paper, can be provided. The abstract should be in 10pt font size.

3.4 Headings

All headings should be numbered according to the decimal numbering system and using upper and lower case. First order headings are typed in 14 pt bold face. Second and third order headings are typed in 12 pt bold face and italics, respectively.

3.5 Equations

Equations should be centered or indented and numbered at the right hand side, e.g.

$$\frac{\partial^2 D}{\partial t^2} - (\nabla^2(\boldsymbol{\gamma}_r \boldsymbol{\tau}_r + \boldsymbol{\sigma}_r \boldsymbol{\nu}_r + F^2)) D = \mathcal{G} \quad (1)$$

3.6 Figures and tables

Figures and tables must be inserted in the text or put on separate pages. The use of colour for the printed version should be avoided where possible.

If coloured graphics should be included in the pdf version, try to keep them meaningful when printed in black and white.

Figures and tables should be numbered consecutively and have a caption below. The captions should be set in 10 pt italics and indented both left and right.

3.7 References

Please list references in alphabetical order in a separate unnumbered section at the end of the text using single line spacing. Refer to them in the text with the name of the author and year, e.g. [Betts and Viterbo \(2000\)](#) or [Betts and Viterbo 2000](#).

4 Using the proceeding class file

This section gives some hints on how to use the proceeding class file, it is not intended as an introduction to latex. Documentation can be found e.g. at the Tex User Group home page (<http://www.tug.org/>) or locally at

<file:/usr/local/apps/latex3.14159/texmf/doc/index.html>.

Also the ECMWF library holds various L^AT_EX books (e.g. [Goossens et al. \(1994\)](#), [Kopka and Daly \(1999\)](#)).

At ECMWF: Before calling any latex command you have to enter

```
use latex_new
```

in order to get the necessary environment!

In general

- Avoid the use of own macros as much as possible. If you use own macros please include them into your document
- Don't add additional spacing in particular at the end of a paragraph.
- Don't change the font sizes.
- Follow the Library's style recommendations (see section 3)

If the formatting tools provided are not sufficient or you want to contribute some extensions please contact us.

There are several ways to produce a pdf document from a L^AT_EX file. The best way seems to be to create a pdf file directly from the .tex input file using the command `pdflatex`. Another possibility would be to create a PostScript file using `latex` and `dvips` and convert this into pdf with either `epstopdf` (which is part of the L^AT_EX installation) or Acrobat Distiller (running on VM-Ware/WTS). Although the proceeding class file was mainly designed for `pdflatex` it should run also with `latex`.

`proceeding.cls` is derived from `article.cls` and uses the following default options: `a4paper`, `11pt`, `twoside`, `onecolumn`, `final`.

The proceeding class file automatically loads various L^AT_EX packages:

graphicx is used to import (eps and pdf) graphics files

mathptmx, **helvet**, **courier** to make use of common PostScript fonts

hyperref enables navigation within the pdf file provided you use the common L^AT_EX referencing commands like `\cite{}`, `\ref{}` (this works also via `latex` → `dvips` → Distiller, `ps2pdf`)

fancyhdr for the customisation of running headers

5 Importing graphics

5.1 Requirements for graphic files

Standard latex can only include graphics in *Encapsulated PostScript* (EPS or EPSF) format which must not consist of more than one page. If you need to convert from PostScript to Encapsulated PostScript use `ps2epsi` or edit your well defined PostScript file with a text editor to include the lines

```
%!  
%%BoundingBox: LLx LLy URx URy
```

at the top. The comment `BoundingBox` specifies the size of the included graphic by the position of the lower left and upper right corner given in typographic points (1 cm = 28 pt). Use `ghostview` to determine the bounding box: the upper left window shows the current position of the graphic cursor.

Unfortunately some graphic tools don't produce proper EPS files. If you have no problems displaying the PostScript version of your latex document in `ghopstview` but can't print it, try another printer. In case of further problems or for some more information please refer to [Reckdahl \(1997\)](#).

If you want to use `pdflatex` you can include pdf graphic files only. Provided you have proper EPS files this is straightforward using the tool `epstopdf` (which is part of the \LaTeX installation) or Adobe Distiller (running on VM-Ware).

5.2 The *graphicx* package

By default, the *graphicx* package is loaded. Encapsulated PostScript (and PDF) files can be included as e.g.

```
\begin{figure}  
\includegraphics[width=30mm,angle=90]{ecmwflogo_blue}  
\includegraphics[width=30mm,angle=90]{TMcover}  
\caption{The ECMWF logo in blue. \label{f:logo}}  
\end{figure}
```

If you omit the graphics file's extension, depending on which compiler you are using (pdf- or latex) the right file type should be found. For more information refer to e.g. Patric W. Daly's '[Graphics and Colour with Latex](#)'.

6 Displaying and printing

Before submitting your contribution please make sure it can be printed from Acrobat reader. Note that your `.tex` file needs to be submitted so that page numbers can be adjusted.

6.1 Latex

Running Latex results in a file with suffix `.dvi`. To display a DVI (device independent) file use `xdvi`. The command `dvips` converts the DVI file into PostScript which allows you to print the document.

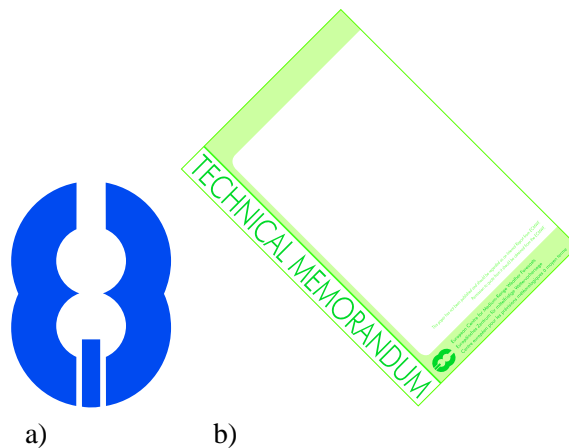


Figure 2: Two imported graphics (Please note that the marks a) and b) are set in the figure environment).
 a) The ECMWF logo in blue. b) The empty title frame of an ECMWF Technical Memorandum.

6.2 pdfLatex

Running pdfLatex results in a pdf file. It can be displayed with Acrobat reader (call `acroread` on Unix/Linux). To print the document from Acrobat reader you should switch the 'Fit to page' button off. If you experience problems try to print PostScript 'Level 1' (if the default 'Level 2' does not work).

Alternatively you can display a pdf file with ghostview (with the advantage of a 'redisplay' button).

References

- Betts, A. and P. Viterbo (2000). Hydrological Budgets and Surface Energy Balance of Seven Subbasins of the Mackenzie River from the ECMWF Model. *J. of Hydrometeorology* 1, 47–60.
- Goossens, M., F. Mittelbach, and A. Samarin (1994). *The LaTeX Companion*. Reading, Massachusetts: Addison Wesley.
- Goossens, M. and S. Rahtz (1999). *The LaTeX Web Companion*. Reading, Massachusetts: Addison Wesley.
- Kopka, H. and P. W. Daly (1999). *A guide to LaTeX. Document preparation for beginners and advanced users*. Reading, Massachusetts: Addison Wesley.
- Reckdahl, K. (1997). *Using imported graphics in Latex*.

Appendix

A Template

The following gives a basic example on the use of *proceeding.cls*.

```

\documentclass{proceeding}

\title{Guidelines for the preparation of ECMWF Proceedings
      with (pdf)\LaTeX}% Title of article

\author{Carsten Maa\ss\ and Els Kooij-Connally} % Author(s)

\affiliation{ECMWF, Shinfield Park, Reading\
             RG2 9AX, United Kingdom\
             C.Maass@ecmwf.int}

\headertitle{Maa\ss, C. et al.:
            Guidelines for the preparation of ECMWF
            Proceedings \dots}%

% If necessary, place your own commands here:
\newcommand{\Real}{\mbox{$I \! \! R$}}

\begin{document}
\maketitle

\begin{abstract}
  This is a basic example on the use of \emph{proceeding.cls}.
\end{abstract}

\section{Introduction}

\section*{Acknowledgements}
\end{document}

```