The `confproc` package*

Vincent Verfaille†

Printed on October 2, 2007

Abstract

The `confproc` package is a new LaTeX 2_ε document-class for conference proceedings. It derives form LaTeX scripts written for the DAFx-06 conference proceedings, mainly based on the `pdfpages` package for including the proceedings papers and the `hyperref` package for creating proper table of contents, bookmarks and general bibliography back-references. It also uses many other packages for fine tuning of table of contents, bibliography and index of authors. The added value of this class resides in its time-saving aspects when designing conference proceedings. See `readme.txt` for a short overview and additional (legal) information, and `example.tex` and corresponding files and scripts for an example of use.

Contents

*This file version number is v0.3: last revision on 2007/09/28; doc is dated 2007/09/28.

†`vincent@music.mcgill.ca`

1 Introduction

1.1 Short history

When editing the proceedings of the 9th International Conference on Digital Audio Effects[1] (DAFx-06, Montréal, Qc, Canada), I developed a set of LaTeX commands in order to produce the best quality proceedings we could achieve thanks to LaTeX. The solution developed was partially documented on the DAFx-06 website [12] and in a technical report [13].

Later on, I created a shorter example version on which other proceedings editors could build up their proceedings. It was used for the 5th International Linux Audio Conference[2] (March 2007, Berlin, Germany; edited by Marije Baalman); for the 13th International Conference on Auditory Display[3] (June 2007, Montreal, Qc, Canada; edited by Gary Scavone); for the Journal on Multimodal User Interfaces[4] (Vol. 1(1), 2007; edited by Christian Frisson); and for the 10th International

[1] DAFx-06: http://www.dafx.ca/dafx06_proceedings.html
[2] LAC2007: http://www.kgw.tu-berlin.de/~lac2007/proceedings.shtml
[3] ICAD-07: http://www.music.mcgill.ca/icad2007/proceedings.php
[4] JMUI: http://www.jmui.org/index.php/JMUI/issue/view/1/showToc

Conference on Digital Audio Effects[5] (September 2007, Bordeaux, France; edited by Sylvain Marchand).

To better share this example with other users of the LaTeX 2ε community, I converted this set of LaTeX 2ε commands into a document class using the information provided in [2], and then into a package producing all necessary files (the class, the documentation, the example, the scripts, etc.) using Docstrip [3] together with the documentation by Scott Pakin [1].

The provided `confproc` class is based on several great packages, among which `pdfpages` [11] by Andreas Matthias (the most useful package for proceedings making) together with `hyperref` [10] by Sebastian Rahtz and Heiko Oberdiek (to manage with all PDF and hyperlinks issues). So, you may consider it as a time saving package to faster produce your conference proceedings.

1.2 Other packages or softwares

I tried several alternative solutions, before deciding to create my own package. There are so many talented people out there developing great LaTeX packages that I would have preferred to use anybody else's solution! Unfortunately, I have not been able to make any of them work in the way I needed.

1.2.1 Using Acrobat

Eventhough it is nothing related to a LaTeX package, nor a free application, the Acrobat Professional software [8] is a solution to create proceedings with proper internal links for a set of PDF papers with internal links. Some useful explanations will help to understand al that has to be done [5]. Indeed, you have to do all the links for the table of contents, the index of authors and the general bibliography by hand. This sounds like hours of work! Would you really plan to do that, and potentially having to re-do it all when discovering any small error, as it happens during both the editing and the printing processes? Any LaTeX solution would provide automatization of proceedings building.

1.2.2 The `combine` package

The one I would have loved to be able to use is the `combine` package by Peter Wilson [9], as it was especially designed for the purpose of combining articles into proceedings. It would have been perfect if it did not have incompatibilities with our `dafx06.sty` proceedings template (or conference style), since many commands are added in the header file. I encountered problems with the `hyperref` package as well as some minor problems with `fancyhdr.sty`: eventually, no paper was inserted in the proceedings, and the LaTeX run would always fail (stopped without any notice during the first paper inclusion). Very frustrating, as it was too late for changing our conference proceedings style to make them compatible with `combine`. I contacted Peter Wilson, to which I am indebt for all the precious advices he gave me, among which was the use of a concurrent solution, *i.e.* the `pdfpages` package!

[5] DAFx-07: http://dafx.labri.fr/

1.2.3 The `pdfpages` package

As no magic solution do exist (yet?), the `pdfpages` package by Andreas Matthias [11] is a very easy way to combine several PDF documents into a single document. Unfortunately, where `combine` seemed to be able to preserve internal references of each paper, `pdfpages` does not provide such feature, as papers are included as a set of single PDF pages. As I am not a specialist of the PDF format and so on, I can imagine that it is extremely complex to achieve such a feature. Anyway, it means that if your original PDF documents had internal links, hyper-references, links to URL, etc, they will simply be all broken.

With this in mind, we used this package as a basis (so it then is not a concurrent), especially for the following feature: clicking on a page in the proceedings will open the corresponding paper (with its proper internal links). Simple!

1.2.4 The `mini.sty` package

The `mini.sty` package [6] does a very good job for concatenating abstracts in a single proceedings document. However, it is not suited (to my knowledge) for conference proceedings, where each paper has to be compiled with the conference style and has its very own title, authors, etc. (that cannot be inserted as (sub)sections).

1.2.5 The AMS `editor` package

The `editor` package from the AMS [7] provides information and documents to produce both the front end and the back end of proceedings, which is of great help to understand all that has to be done (particularly the table of contents and the re-numbering of all papers). However, as they explicitely say it, there is no mechanism to assemble the files together.

1.3 Description of the solution provided

Using all the knowledge I could find around (and in the previously cited documentations about how to do a good PDF document for the proceedings), together with many tricks I found, this LaTeX class provides the following features:

1. automatically generates the whole proceedings, after changing any of its paper information (thanks to LaTeX!);
2. concatenates papers by inserting several individual documents into one document (with `pdfpages`);
3. provides 'clickable' links (hyper-references) from the table of contents, the index of authors and the full bibliography to access to the corresponding page(s) (with `hyperref`);
4. provides access to individual papers: a click on any paper's page opens the corresponding PDF paper (that still has its internal links); this feature comes with `pdfpages`.

5. left-numbers the table of contents (using `titlesec`);

6. displays the index of authors with two or three columns (hack derived from `twocolindex`, and using `multicolumn`);

7. organizes the bookmarks by proceedings' sections: the preamble, the table of contents, the days/sessions, the full bibliography, and the index of authors. Also, authors' names appear under their relative paper title.

8. organizes the table of contents: only the index of authors appearing in the table of contents (using `tocbibind`);

9. provides full bibliography, or at least help and informations for you to build one, with right-flushed back-reference page numbers.

10. enables fast LaTeX run, using the `draft` option of `pdfpages`. Useful when repetitively correcting errors, changing the layout (index, bookmarks, table of contents), merging bibliographies, etc.

11. orders the packages. As `hyperref` redefines most of LaTeX internal commands, a lot of care has to be taken when ordering the insertion of packages, otherwise some of the features can disappear.

12. gives information about the merging process involved to generate a general bibliography, as well as about production issues.

1.4 The pros and cons

There are numerous advantages with the `confproc` class, as it:

- provides an all-in-one package (with various useful scripts);
- saves time: you can directly re-use the tricks I found;
- provides several commands and options to customize your document;
- correctly inserts the `hyperref` package as the last one, so that it can properly redefine all internal macros as it does.

There are also disadvantages, among which:

- the order of package insertion is fixed, and you may not change it. Otherwise, by adding packages after the class insertion, you may break the LaTeX commands redefined by `hyperref`. This package has to be inserted last, but will not be anymore after you add packages in your document. This is the main limitation I can think of, and would appreciate any feedback, comments, tricks, that would help to resolve this issue.
- not everything is transparent to the user (or look into the class code);
- customization is limited to the class designer's defined commands;

- creates DAFx-like proceedings: if you liked it, great; otherwise, well, you will need to work more to change what you do not like;
- the `confproc` package is young: its functionalities were only used 4 times (in its previous form of LaTeX commands). I however used it to recompile the DAFx-06 proceedings, in order to check compability, and it was able to re-generate the exactly same document!

1.5 To do / bugs

At this time this package offers all the features the original scripts did, and even more. So, as far as I am concerned, it is 'complete' as is. You may however consider debugging/adding the following functionalities for you own use:

- fix the flush-right problem for back-references in the bibliography;
- have the pdf link pointing to the top of the page of the index/bibliography, and not to a particular position in the text;
- provide a mechanism to set the argument of `\pdfbookmark[0]{Program}{contents}`, that customizes the table of contents bookmark entry (does not work yet);
- use the `keyval` package to properly manage options like `<option>=<value>`;
- provide a way to allow for package inclusion in the proceedings that are placed **before** the `hyperref` package. I tried including the `hyperref` package using the `\AtBeginDocument` command, but was not successful yet.
- handle programs with parallel sessions (table of contents);
- fix bugs, misspellings, etc.

1.6 Thanks

Thanks go to Philippe Depalle for offering me to be the DAFx-06 proceedings editor, to Julien Boissinot for saying "Why don't you make a class?", to Will Peterson for many comments on possible improvements, and to Gary Scavone, Sylvain Marchand, Marije Baalman, Christian Klünder and Christian Frisson for being the guinea-pigs of the previously existing scripts.

2 Installation

2.1 Steps summary

After checking that you have all required packages (see sec. 2.2), do the following:

1. generate the documentation: '`latex confproc.dtx`';

2. generate the `confproc.cls` file: '`latex confproc.ins`';

3. finish the documentation: '`latex confproc.dtx`' (two times);

4. optionally: move `confproc.cls`, `confproc.pdf` and `example.tex` and all the other example-related generated files;

this is explained with more details in sec. 2.3.

2.2 What do you need

There are some packages that are required with the use of `confproc`, while others are simply recommended:

1. Packages, that are essentially required by `confproc`:

   (a) LaTeX 2_ε (at least the 1994/12/01 release)
   CTAN: macros/latex/base
   `confproc` is a LaTeX 2_ε document-class.

   (b) `pdfpages` (at least 2006/08/12 v0.4a)
   CTAN: macros/latex/contrib/pdfpages/pdfpages.dtx
   For including the articles of the proceedings as PDF documents.

   (c) `hyperref` (at least 2007/02/07 v6.75r)
   CTAN: macros/latex/contrib/hyperref/hyperref.dtx
   For creating hyper-references in the PDF file.

   (d) `hypcap` (at least 2006/02/20 v1.5)
   CTAN: macros/latex/contrib/oberdiek/hypcap.dtx
   To provide proper hyperref anchors to table and figure captions.

   (e) `color` (at least 2005/11/14 v1.0j)
   CTAN: macros/latex/required/graphics/color.dtx
   This package is used at least by `hyperref` to provide color links.

   (f) `fancyhdr` (at least 2005/03/22 v3.2)
   CTAN: macros/latex/contrib/fancyhdr/fancyhdr.sty
   Used to change the headers and footers for all pages of the proceedings, so that they can match the paper template style, if any.

   (g) `index` (at least 2004/01/20 v4.2beta)
   CTAN: macros/latex/contrib/index/index.dtx
   Used to produce the index of authors.

   (h) `tocbibind` (at least 2003/03/13 v1.5g)
   CTAN: macros/latex/contrib/tocbibind/tocbibind.dtx
   For changing the `\indexname` command and disabling automatic insertion of index in the table of contents.

   (i) `titletoc` (at least 2005/01/22 v1.5)
   CTAN: macros/latex/contrib/titlesec/titletoc.sty
   For changing the table of contents layout.

(j) `multitoc` (at least 1999/06/08 v2.01)
CTAN: macros/latex/contrib/ms/multitoc.dtx
Used to provide a two column table of contents.

(k) `multicol` (at least 2006/05/18 v1.6g)
CTAN: macros/latex/required/tools/multicol.dtx
Used to provide multi-column index of authors.

(l) `newapa` (at least 1991/06/13 v2.0)
CTAN: biblio/bibtex/contrib/newapa/
For the general bibliography style (note that it is slightly modified after insertion).

(m) `newapave` (at least 2006/07/31 v2.1)
Included in the `confproc` package.
For the general bibliography style, if you like the one developed for DAFx-06 (year at the end, before back-references that are right-flushed).

(n) `sectsty` (at least 2002/02/25 v2.0.2)
CTAN: macros/latex/contrib/sectsty/sectsty.dtx
Used for its `\chapterfont` command to give the same headers/footers to the table of contents.

2. Non-exhaustive list of packages that are being successfully used with `confproc` in the provided example:

(a) `setspace` (at least 2000/12/01 6.7)
CTAN: macros/latex/contrib/setspace/setspace.sty
For changing the line spacing of welcome letters.

(b) `inputenc` (at least 2006/05/05 v1.1b)
CTAN: macros/latex/base/inputenc.dtx
For changing the input encoding, for instance to run LaTeX on a document with accents (for the authors' names and the paper titles).

(c) `fontenc` (at least 2005/09/27 v1.99g)
CTAN: macros/latex/unpacked/fontenc.sty
For changing the font encoding.

(d) `times` (at least 2005/04/12)
CTAN: fonts/psfonts/corelpak/times/psnfss/times.sty
For changing the default LaTeX font to 'Times', as it displays better in PDF files.

(e) `layout` (at least 2000/09/25 v1.2c)
CTAN: macros/latex/required/tools/layout.dtx
For fine tuning you document header and footer so that they match those of the the paper templates.

(f) `layouts` (at least 2004/10/25 v2.6c)
CTAN: macros/latex/contrib/layouts/layouts.dtx
For checking the fine tuning of the table of contents layout, in which

case the `layouts` package is for you. However, if the table of contents layout is printed too early, it will not properly display its layout...

Under normal circumstances you don't have to install so many of these packages (except `confproc` of course: its installation process is described in the next section), since most of them should be part of your LaTeX distribution. If this is not the case you'll find the most recent versions at CTAN[6].

2.3 Installation steps

The provided `confproc.dtx` file is an 'one-file-contains-it-all': it contains the `.cls` class file, its `.pdf` documentation, a customizable driver for the documentation, the `.ins` batch file, a complete example, and a 'read me'. To install the package:

1. run `confproc.dtx` through LaTeX. This will generate the batch file (`confproc.ins`) and a `readme.txt`. Additionally the documentation (`confproc.pdf`) is generated (to get the cross-references right, you have to rerun this twice, however).

2. run the newly generated `confproc.ins` through LaTeX to do the actual installation. This will generate the `confproc.cls` class file, the example file (`example.tex`) as well as other example-related files (`exsessions.tex`, `expapersswitch.tex`, `exbiblio.bib` and `exprogram.csv`) and scripts (Perl: `procswitchandtoc.pl`; Unix: `buildcls`, `cleancls`, , `buildproc`, `buildpapers` and `buildcppdfpapers`), the documentation driver (`confproc.drv`) and a sample configuration file (`confproc.cfg`).

3. to finish the installation it is recommended to move the documentation (`confproc.pdf`) and the example-related files to where you collect the documentations (with a TDS compliant LaTeX installation this would be '`$(TEXMF)/doc/tex/latex/confproc`' for example).

4. for a demonstration of the possibilities of `confproc` see the `example.tex` file and run it through LaTeX. For a more complete demonstration, use the `buildproc` Unix script (see sec. 4.6.3), that will make for you all the necessary steps to provide the final version of the example proceedings.

The '`latex confproc.dtx`'-run above will—by default—generate the 'user' documentation. If you need the full documentation (with complete listing of the documented source code and/or command index and the change history) you may edit `confproc.drv` to meet your needs (never edit `confproc.dtx` itself!). For more information on the enhanced documentation see `confproc.drv` or `readme.txt`.

2.4 Unix script to make the class

You may consider using this Unix script (after setting the path to LaTeX 2$_\varepsilon$ binaries) in order to generate the class and the documentation, and to prepare the example-related files. It uses `bash`:

[6] Comprehensive TeX Archive Network: http://www.ctan.org/

```
⟨*buildcls⟩
#!/bin/sh
```

First, you may set the path to LaTeX 2ε binaries:

```
#-- set path to LaTeX binaries
LaPath="/usr/texbin/" #- TexLive 2007
#LaPath="/usr/local/teTeX/bin/i386-apple-darwin-current/" #- teTeX
```

and then, only if necessary, change the names to the LaTeX compilers:

```
#-- set names of LaTeX and related compilers
Latex=$LaPath"pdflatex"
Index=$LaPath"makeindex"
```

as well as the document and example target names:

```
Target="confproc"  #- set document's name
extarget="example" #- se tthe example folder name
```

We can start building the documentation and the `.ins` file:

```
#-- build doc, class and example files
$Latex $Target.dtx #- build doc. and .ins file
$Latex $Target.ins #- build class and example files
```

We then create the example folder:

```
#-- prepare scripts for building example
mkdir $extarget #- create the folder
```

and move the example-related files and scripts:

```
mv ex*.* $extarget/ #move all example files into it
mv buildproc.tex $extarget/buildproc # move scripts into it
mv buildcppdfpapers.tex $extarget/buildcppdfpapers
mv buildpapers.tex $extarget/buildpapers
mv procswitchandtoc.pl $extarget/
```

We also copy the class, the index style, the bibliography style, and the example related folders:

```
cp -r pictures $extarget/ #- copy pictures into it
cp -r papers $extarget/ #- copy papers into it
cp confproc.cls $extarget/ #- copy the class into it
cp confproc.ist $extarget/ #- copy the index style into it
cp newapave.* $extarget/ #- copy the newapave bib style files
```

We then change the permission of the example-related scripts:

```
cd $extarget
chmod +x buildproc
chmod +x procswitchandtoc.pl
```

and move the `expages.tex` generated file to the right place:

```
mv expages.tex papers/
cd ..
```

Once it is done, we can finish the documentation. this full sequence is only necessary if you generate the implementation, index and changes history:

```
#-- finish to build the documentation
```

```
$Latex $Target.dtx #- re-run doc for toc update
$Latex $Target.dtx #- re-run doc for proper back-references
$Index -s gind.ist $Target  #- with \CodelineIndex of \PageIndex
$Index -s gglo.ist -o $Target.gls $Target.glo  #- with \RecordChanges
$Latex $Target.dtx #- insert index & list of changes, re-number
$Latex $Target.dtx #- last run with proper page numbers
```

Since there are 2 scripts, one to install (this one) and one to clean up all the mess (mainly used by me during building tests), we also prepare the latter:

```
#-- prepare scripts for cleaning package
mv cleancls.tex cleancls
chmod +x cleancls
```

By uncommenting the last line, you will also build the example!

```
#-- build example
cd $extarget
#./buildproc
```
⟨/buildcls⟩

This script is generated by the first LaTeX run on `confproc.dtx`. You then have to change its permission in the `bash` shell to make it executable:

```
chmod +x buildcls
```

Then, you can run it from the `bash` shell:

```
./buildcls
```

2.5 Unix script to clean up the class' folder

Here is another Unix script for cleaning up the folder where the class was generated:

⟨∗cleancls⟩
```
#!/bin/sh
mkdir backup #--- move the files to be kept
mv confproc.dtx backup/
mv buildcls backup/
cp cleancls backup/
mv pd1enc.def backup/
rm *.* #--- clean up!
mv backup/confproc.dtx . #--- move the backed up files
mv backup/buildcls .
mv backup/cleancls .
mv backup/pd1enc.def .
rm -r backup #--- remove the temporary backup folder
```
⟨/cleancls⟩

You may want to use it to re-generate the whole package from the `.dtx` file. Note that this script too is generated by the first LaTeX run on the `confproc.dtx` file.

3 Using the confproc package

3.1 Loading

The class is loaded with:

```
\documentclass{confproc}
```

You can modify the behavior of confproc with options (all available options are described below in subsection 3.2):

```
\documentclass[<options>]{confproc}
```

3.2 Options

There are two types of options: some are specific to the confproc class (sometimes also passed to other packages), others are simply passed to the book class, the hyperref or pdfpages packages. A summary of all options is given in Tab. 1 and 2.

3.2.1 Options specific to confproc

Compilation step

compil

The option compil with one of its 3 possible values is the most important option to set, as it changes the page numbering and the speed of the LaTeX run, once the other options dealing with the layout suit you. Depending if you are working on the conference program definition, on merging the bibliographic items, or on producing the final document, you will use one of the three following options:

compil=bibmerge

- compil=bibmerge: this first option is to be used if you are generating a general bibliography for the proceedings. It will then only insert the first and last page of each paper, plus a page with all citations from the current paper (thus creating back-references from the bibliography, as for the compil=bibbackref option, except that page numbers are not the final ones). This means that page numbering of PDF papers is incorrect, but the LaTeX run is faster.

compil=bibbackref

- compil=bibbackref: this option is for all but last LaTeX runs, once you finished the bibliography merging process. It generates proper back-references from the bibliography by replacing the last page of the paper by an inclusion of citations to the paper it cites. It also generates proper page numbering for the table of contents and the index of authors. This requires several LaTeX runs, as you can see in the corresponding Unix script in sec. 4.6.3. You will then need a final compilation with the compil=last option. If you need to check page numbering of the articles, then use the final option too, to force inserting the PDF instead of a blank page, together with the movepagenumber option if your articles have page numbers.

compil=last

- compil=last: this is for the last LaTeX run. It means that you previously defined you r program (paper ordering), generated the general bibliography (and merged common items), re-compiled all papers if necessary (in order to re-number them all, and have them using the new bibliography), and compiled the document enough times with the compil=bibbackref option, so as to have proper page numbering and back-references in the table of contents, the index of authors and the general bibliography (see sec. 5.1 and 4.6.3).

draft

As the LaTeX run may be long when only making a small change, you may want to speed up the process by using the draft option from the pdfpages package (see sec. 3.2.4). This is useful for instance when making layout changes, editing the welcome letters, or working on generating proper page numbering. This will replace each PDF page by an almost blank page. The other possible option is

final

final. Note that it is configured by default depending on the compil option you used, but can be modified anyway.

verbose
debug

Also, the verbose or debug option adds some debug comments in the LaTeX console, both from confproc and hyperref packages, that might help to track problems if any. It can be used at any compilation step, of course!

Proceedings type

Depending wether the proceedings are to be printed or distributed as a PDF electronic document, you may prefer to have color links or not[7]. All the hyperlink features work properly by default, so the only option you have to set is:

printed

- printed for a version with black links (identical to the colorlinks=false option of the pdfpages package, see sec. 3.2.4);

electronic

- electronic for a version with user-defined colors for links (identical to the default colorlinks=true option of the pdfpages package, see sec. 3.2.4).

Proceedings layout

The next options deal with the layout customization for the table of contents, the index of authors and the general bibliography:

onecoltoc

- onecoltoc: prints the table of contents with one column (default);

twocoltoc

- twocoltoc: prints the table of contents with two columns;

tocnumleft

- tocnumleft: prints page numbers on the left of table of contents (default), as chosen for DAFx-06 as it seems to provides faster click access to the papers.

tocnumright

- tocnumright: prints page numbers on the right of table of contents;

onecolbib

- onecolbib: prints the general bibliography with 1 column;

twocolbib
- twocolbib: prints the general bibliography with 2 columns (default);

threecolindex
- threecolindex: prints the index of authors with 3 columns (default);

twocolindex
- twocolindex: prints the index of authors with 2 columns.

Headers

The next four settings for the headers option should be used as exclusive settings, as they define to which pages a header and footer should be added:

headers=no
- headers=no (default): no headers added to any pages;

headers=pdfonly
- headers=pdfonly: headers only added to PDF-included files;

headers=exceptpdf
- headers=exceptpdf: headers added to all pages except PDF-included files;

headers=allpages
- headers=allpages: headers for all pages.

For instance, if your paper templates do not have any template (simplest solution as you do not have to renumber all papers nor to tweak the x and y shift for PDF insertion), you may use the headers=allpages. Conversely, if your paper template have a header and footer defined, you may use the headers=exceptpdf. In the case you want proceedings without header/footer (you may want to add them in Acrobat with other fancy fonts and layout), use the headers=no option. Finally, if (for a strange reason I did not figure out yet) you want to insert header/footer on the PDF inserted papers only, use the headers=pdfonly.

movepagenumbers

In the case you are using paper templates with page numbers, you may want to check that the page numbering of the papers is ok. You can do so using the movepagenumbers option, that moves the footer by a few millimeters down, combined with the headers=allpages or headers=pdfonly. You will see two footers appearing: the one from the paper, and below the one from the proceedings.

Depending wether your document is oneside or twoside, you may want to force it to always clear single or double page. Do this using the following options:

cleardoublepage
- cleardoublepage (default);

clearsinglepage
- clearsinglepage.

You may want to force it to always:

cleardoublepage
- clear double page after each paper in 1-side mode using cleardoublepage (used with oneside);

clearsinglepage
- not clear double page after each paper in 2-side mode using clearsinglepage (used with twoside).

[7] Remember that color is expensive to be printed, and when printed in a grey scale, it may reduce the readibility of the linking text.

3.2.2 Options from the book package

The following options are passed to the book class:

a4paper
- a4paper: for the European A4 paper (also passed to hyperref);

letterpaper
- letterpaper: for the North American letter paper (also passed to hyperref);

10pt,11pt,12pt
- 10pt, 11pt and 12pt for the font size;

twoside
- twoside for two-sided documents (chapters only start on odd & right pages). Note that by default, this option will add a blank page to all inserted papers with an odd number of pages, so that they all start on a right page. This does not save paper, but provides proceedings that are much easier to navigate.

oneside
- oneside for one-sided documents (chapters may start on any page).

3.2.3 Options from the hyperref package

As the confproc package is based on the hyperref package for all PDF and links aspects, there are many options you can change:

colorlinks=true
colorlinks
- colorlinks=true or colorlinks provides color links in the table of contents, index of authors and general bibliography to the corresponding pages in the proceedings. This option has the same effect as the electronic option from the confproc package.

colorlinks=false
- colorlinks=false provides links without color, which is particularly helpful for printed proceedings (where using color increases the cost of printing, or reduces the quality if printed in black and white). This option has the same effect as the printed option from the confproc package.

citecolor=colorforcite
- citecolor=colorforcite uses the color colorforcite (to be defined by the used) for links to bibliography items cited;

linkcolor=colorforlink
- linkcolor=colorforlink uses the color colorforlink for links, such as from the index of authors, table of contents and general bibliography back-references;

urlcolor=colorforurl
- urlcolor=colorforurl uses the color colorforurl for URL, mainly in the general bibliography but also in the publishing information, for example;

verbose,debug
- verbose and debug prints more information from the hyperref package;

a4paper,letterpaper
- a4paper or letterpaper are options passed to hyperref;

bookmarksopen
- bookmarksopen=true/false: opens/closes the bookmark in the PDF file;

bookmarksopenlevel
- bookmarksopenlevel=1/0/2: the bookmark is open at level 1 (resp. 0, 2).

Option	Default	Package(s)	Values/Function
10pt	√	book, confproc	10 pt is normal font size
11pt	—	book, confproc	11 pt is normal font size
12pt	—	book, confproc	12 pt is normal font size
backref	√	hyperref	add reference page number and link for each bibliographic item in the general bibliography
breaklinks	√	hyperref	allows links to break over lines by making links over multiple lines into PDF links to the same target (great for table of contents and bibliography in two columns)
citecolor=colorforcite	green	hyperref	use the user-defined colorforcite color for links to bibliography items cited
colorlinks=false	—	hyperref	links without colors. Equivalent to printed
colorlinks	—	hyperref	links with colors. Equivalent to colorlinks=true and electronic
colorlinks=true	√	hyperref	links with colors. Equivalent to colorlinks and electronic
compil	bibbackref	confproc	last: for the final compilation bibmerge: faster compilation for working on the general bibliography bibbackref: preparing back-references for the final compilation
debug	—	hyperref, confproc	adds debug info when running LaTeX. Same as verbose
draft	—	pdfpages	does not include PDF papers
electronic	√	confproc	links with colors. Identical to colorlinks=true from pdfpages
final	√	pdfpages	includes all PDF papers (slow)
headers	no	confproc	no: no headers added to any pages
	—		pdfonly: headers only added to papers included as PDFs
	—		exceptpdf: headers added to all pages except to papers included as PDFs (default)
	—		headers=allpages: headers for all pages, PDFs included
hyperindex	√	hyperref	text of index entries are hyperlinks, to link authors form the index to their various papers

Table 1: *Alphabetical list of all options 1/2*

Option	Default	Package(s)	Values/Function
linkcolor=colorforlink	red	`hyperref`	use the user-defined colorforlink color for links, such as from the index of authors, table of contents and general bibliography back-references
linktocpage	√	`hyperref`	link provided by page number instead of text
movepagenumbers	—	`confproc`	move page numbers down by a few millimeters
onecoltoc	√	`confproc`	one column table of contents
oneside	—	`book`, `confproc`	for one-sided documents (new chapters start on odd & right pages)
pdfpagelabels	√	`hyperref`	set PDF page labels: compulsory for creating any link to page!
pdfstartview=XYZ	√	`hyperref`	open the PDF file in Acrobat with zoom=100% instead of full screen
pdftex	√	`hyperref`	set up `hyperref` for use with the pdftex program
plainpages=false	√	`hyperref`	forces page anchors to be named by the arabic form of the page number, rather than the formatted form
printed	—	`confproc`	links without color. Identical to colorlinks=false from `pdfpages`
raiselinks	√	`hyperref`	forces `\special` commands to reflect the real height of the link (which could contain a graphic)
tocnumleft	√	`confproc`	left page numbering table of contents
tocnumright	—	`confproc`	right page numbering table of contents
threecolindex	—	`confproc`	three columns index of authors
twocolindex	—	`confproc`	two columns index of authors
twocoltoc	—	`confproc`	two columns table of contents
urlcolor=colorforurl	cyan	`hyperref`	use the user-defined colorforurl color for URL (general bibliography, publishing information)
verbose	—	`hyperref`, `confproc`	adds debug info when running LaTeX. Same as debug
a4paper	—	`hyperref`, `confproc`	European A4 paper
letterpaper	√	`hyperref`, `confproc`	North American letter paper
twoside	√	`book`, `confproc`	two-sided documents (new chapters do not start on odd & right pages)

Table 2: *Alphabetical list of all options 2/2*

There are also several options that are given by default to the `hyperref` package, and that you should not change except you exactly know what you are doing and why. Indeed, they change specific properties of hyperlinks (such as back-references) that you may which to preserve for you electronic version of the proceedings (please refer to the `hyperref` documentation [10] for more complete, accurate and up-to-date descriptions):

`pdftex` • pdftex: to set up `hyperref` for use with the pdftex program.

`raiselinks` • raiselinks: in the hypertex driver, the height of links is normally calculated by the driver as simply the base line of contained text; this options forces `\special` commands to reflect the real height of the link (which could contain a graphic).

`hyperindex` • hyperindex: makes the text of index entries into hyperlinks. It is used for the index of authors, to link back to their various papers.

`backref` • backref: allows for back-references in the general bibliography.

`pagebackref` • pagebackref: adds 'backlink' text to the end of each item in the bibliography, as a list of page numbers (this can only work properly if there is a blank line after each `\bibitem`).

`plainpages=false` • plainpages=false: forces page anchors to be named by the arabic form of the page number, rather than the formatted form. This is useful as the proceedings is using the `book` class, and therefore has a front matter (publishing information, welcome letters, table of contents, etc) before the papers.

`pdfpagelabels` • pdfpagelabels: sets PDF page labels, to be able to link to them.

`breaklinks` • breaklinks: allows links to break over lines by making links over multiple lines into PDF links to the same target. This is particularly useful for 2-columns table of contents with the option linktocpage=false (not the default); and for long URLs in the general bibliography.

`linktocpage` • linktocpage: makes page number (instead of text) to be the link to table of contents (as well as list of figures and list of tables, but they are not often used for proceedings).

`pdfstartview=XYZ` • pdfstartview=XYZ: opens the PDF in Acrobat with zoom=100% instead of full screen; especially useful if working with a big screen (*e.g.* 30 inches).

Important remark: unknown options used with the `confproc` package are passed to the `hyperref` package. That way, you can change any of the options existing in the `hyperref` documentation; a good thing for fine tuning your document, but at your own risks if you do not read the corresponding documentation.

3.2.4 Options from the `pdfpages` package

The `confproc` package is also based on the `pdfpages` package for paper inclusion. There are then two options you may use, that are passed to the `pdfpages` package:

`final`
- final: inserts the PDF pages, resulting in a slow LaTeX run. When working on the layout and on the bibliography merging process, you may want to see all included papers.

`draft`
- draft: does not insert the PDF pages, resulting in a fast LaTeX run. When working on generating the table of contents and index of authors, you may not need to see PDF documents, but rather those metadata.

This pair of option final/draft is **not** exclusive. Therefore, if using the two, it always is final that will 'win'. For instance, using:

```
\documentclass[final,draft]{confproc}
```

you would expect the last option to be the one used by the package. In fact, it will rather use:

```
\documentclass[final]{pdfpages}
```

and the papers will all be included, with slower LaTeX compilation. So, if you wish to use the draft option, be sure not to leave anyfinal anywhere else!

3.2.5 Options by default

By default, the set of options used (if not defined by the user) is:

- letterpaper, 10pt, twoside (passed to `book`);
- electronic, twosidepapers, headers=no, compil=bibbackref, tocnumleft, onecoltoc, threecolindex, twocolbib;
- colorlinks=true, linkcolor=red, citecolor=blue, pagecolor=red, urlcolor=blue, bookmarksopen=true, bookmarksopenlevel=1 (passed to `hyperref`).

3.3 Commands and customization

Here is a non-exhaustive list of what you may customize in the proceedings:

- the proceedings PDF metadata (see sec. 3.3.1);
- the titles for special section (see sec. 3.3.2);
- the front page (see sec. 3.3.3);
- the document layout (see sec. 3.3.4);
- the document header/footer (see sec. 3.3.5);

- the publishing information;
- the welcome letter(s);
- the title/author style in the table of contents and bookmarks (see sec. 3.3.6);
- the color for links (see sec. 3.3.7);
- and of course how many columns for the table of contents (1 or 2), bibliography (1 or 2) and index of authors (2 or 3) using options (see sec. 3.2.1).

All this is implemented in the provided example; it is now re-documented just in case you would start a document from scratch.

3.3.1 PDF metadata

The PDF metadata are information you will get in the operating system about the electronic version of you proceedings. There are at least three metadata you should consider setting, which are given together with their default values:

`\procpdftitle`
- PDF title (default: 'Proceedings title').
  Use the `\procpdftitle` command to change it:

```
\renewcommand{\procpdftitle}{DAFx-06 Proceedings}
```

`\procpdfauthor`
- PDF author (default: 'Proceedings author/editor').
  Use the `\procpdfauthor` command to change it:

```
\renewcommand{\procpdfauthor}{Vincent Verfaille, McGill University}
```

`\procpdfsubject`
- PDF description/subject (default: 'Proceedings description').
  Use the `\procpdfsubject` command to change it:

```
\renewcommand{\procpdfsubject}{Proc. of the 9th Int. Conf. on%
    Digital Audio Effects - Montreal, Quebec, Canada}
```

`\hypersetup` Those commands are used in the `\hypersetup` command; you may also redefine all the setup items by redefining `\hypersetup` in your own document's preamble.

3.3.2 Special section titles

The titles of the following special sections can be redefined too:

`\contentsname`
- table of contents (default: 'Conference Program').
  Use the `\contentsname` command to change it:

```
\renewcommand{\contentsname}{Conference Program}
```

- general bibliography (default: 'Full Bibliography').
  \bibname Use the \bibname command to change it:

```
\renewcommand{\bibname}{General Bibliography}
```

- index of authors (default: Index of Authors').
  \indexname Use the \indexname command to change it:

```
\renewcommand{\indexname}{List of Authors}
```

You may use some the titlesec commands to redefine the chapter and section styles, if you wish to adapt them to your needs.

3.3.3 Front page

If you wish to design the front page in the same LaTeX document as the proceedings, you may use the usual \maketitle command as follows:

```
\author{Bob, Department of blah blah blah}
\title{Proceedings of the blah blah blah}
\date{\today}
\maketitle
```

You may also use the commands \procpdfauthor \procpdftitle if their value is the same as for the PDF metadata:

```
\author{\procpdfauthor}
\title{\procpdftitle}
```

It is then your turn to do fine tuning of all the parameters of this page so that it looks as you wish (potentialy with logos, images, etc).

In the DAFx-06 proceedings, we chose instead to insert the front page as a PDF document. Indeed, we found it easier to design our very own cover (using XeTeX), and you could consider using other tools that LaTeX. For that reason, we used the following command instead:

```
\includepdf[noautoscale,pages=1,link]{\PICTPATH ex_1stpage.pdf}
```

Note that this PDF file is not generated by the package, but it is provided in the .zip archive of the package.

3.3.4 Document layout

Letter format We used the following for tuning page attributes:

```
\oddsidemargin  -4.95truemm
\evensidemargin -4.95truemm
\topmargin 0truept
\headheight 12truept
\footskip 0truept
```

```
\textheight 229truemm
\textwidth 175truemm
\voffset -28truept
\headsep 20truept
```

so that the proceedings layout can perfectly match the one of individual papers. This means that you have to check for those values in your template. Then, you may set the left/right and up/down shifts of the inserted PDFs files using:

```
\setlength{\LaTeXxShift}{0pt}
\setlength{\LaTeXyShift}{-28pt}
\setlength{\WordxShift}{10pt}
\setlength{\WordyShift}{-40pt}
```

The values may differ depending if the papers were generated using a LaTeX template and a Word template, in the case your templates are not perfectly identical (which is often the case). The default values provided by the class are those used for the DAFx-06 proceedings, and were tested for both letter and A4 format.

A4 format We used the following for fine tuning page attributes:

```
\oddsidemargin  -4.95truemm
\evensidemargin -10.95truemm
\topmargin 0truept
\headheight 12truept
\footskip 0truept
\textheight 229truemm
\textwidth 175truemm
\voffset -28truept
\headsep 20truept
```

Then, set the left/right and up/down shifts of the inserted PDFs files using:

```
\setlength{\LaTeXxShift}{8.45pt}
\setlength{\LaTeXyShift}{-3pt}
\setlength{\WordxShift}{10pt}
\setlength{\WordyShift}{-40pt}
```

3.3.5 Header and footer

As the paper templates often have a header and footer, you may want to use the same headers/footers for the proceedings (using the headers option, see sec. 3.2.1).

`\proclhead` This is costumized by redefining the `\proclhead` command for the header:

```
\renewcommand{\proclhead}{\em{\small{Proc.~of the 9\textsuperscript{th} %
Int.~Conference on Digital Audio Effects (DAFx-06), Montreal, %
Canada, September 18-20, 2006}}}
```

`\proccfoot` and the `\proccfoot` for the footer:

```
\renewcommand{\proccfoot}{{\vskip 11mm}{\small DAFX-\thepage}}
```

In order to check the page numbering when inserting papers with page numbers, you may want to move the footer (using the movepagenumbers option, see sec. 3.2.1) by a few millimeters down using the `\procoptfootskip` command:

\procoptfootskip

```
\setlength{\procoptfootskip}{3mm}
```

As soon as you remove the movepagenumbers option, the footer comes back to its normal position.

3.3.6 Title/author layout

The `\texorpdfstring` command allows for a different text in LaTeX and for the PDF (which is good for having different bookmark titles and table of contents entries). It is then used by default to add a line break between the paper title and the authors' names in the table of contents. You can customize the title font style using the `\papertitlestyle` command as in:

\texorpdfstring

\papertitlestyle

```
\renewcommand{\papertitlestyle}{\sc}
```

that defines the paper's title in small capitals. You can also customize the author font style using the `\paperauthorstyle` command as in:

\paperauthorstyle

```
\renewcommand{\paperauthorstyle}{\texorpdfstring{, }{\break}}
```

that replaces the line break (between the paper title and the list of authors in the table of contents) by a comma in the table of contents only (not in the PDF bookmark).

3.3.7 Colors

When inserting the document class, you may have defined the colors for links with the following options:

```
\documentclass[a4paper,10pt,twoside,%
  citecolor=colorforcite,linkcolor=colorforlink,urlcolor=colorforurl,%
  pagecolor=colorforpage]{confproc}
```

This means that you have to define the `citecolor`, `linkcolor`, `urlcolor` and `pagecolor` colors somewhere before starting to use them (at least in your document preamble). In the provided example, we used the following colors:

```
\definecolor{colorforlink}{rgb}{0,0,0.8}
\definecolor{colorforpage}{rgb}{0,0,0.7}
\definecolor{colorforcite}{rgb}{0,0.8,0}
\definecolor{colorforurl}{cmyk}{1,0,0,0}
```

There are a few things you need to know about it:

- the way colors are declared is explained in the `color` package.
- the `colorforlink` is used for all links in the table of contents and index of authors, as well as back-references.

- the `colorforpage` is not currently used in the example. It will only be used if you decide to point to a given page from the preamble, for instance.
- the `colorforurl` is useful only if you include URL(s) in you preamble, or in the general bibliography (if any).
- the `colorforcite` is useful only in two cases:
  - without a general bibliography: if you cite any document form the preamble (not from a paper);
  - with a general bibliography: it is only used during the merging process. After this process and when generating the final document, all citations will disappear, as the last page of the paper is properly inserted.

4 Full Example

Here is a working example file. it was tested by re-generating the DAFx-06 proceedings, almost one year after the conference. The resulting PDFs were almost identical (there are improvements for bookmarks managements), but this solution is much easier to use and read. To generate it, run `confproc.ins` through LaTeX. Better, run the `bash` script called `buildproc` (see sec. 4.6.3): it will run all the steps for you.

4.1 Class option switch!

As the LaTeX-runs of the provided example can be automatized using Unix scripts, I found it useful to switch between two set of options used when inserting the class. To do so, two files are created, and the Unix script rename then when needed, so that the example uses the proper file.

4.1.1 Options set for non-final LaTeX runs

The first file is used for all LaTeX runs except the final one. In this example, it adds headers on all pages (headers=allpages), and move the footer (movepagenumbers) so that we can check page numbers. Also, the option is compil=bibbackref, which creates proper back-references.

```
59 ⟨*exclasspre⟩
60 \documentclass[a4paper,10pt,twoside,twosidepapers,
61   compil=bibbackref,headers=allpages,movepagenumbers,electronic,
62   citecolor=colorforcite,linkcolor=colorforlink,urlcolor=colorforurl,
63   pagecolor=colorforpage]{confproc}
64 ⟨/exclasspre⟩
```

4.1.2 Options set for final LaTeX run

The second file is only use for the final LaTeX run: it then removes options such as movepagenumbers, and uses headers only on the pages where it is necessary (using headers=exceptpdf, as you may have finished the page numberings before generating the final version of the proceedings!). It also uses the compil=last option, in order to insert the last page of each paper with proper back-references generated during the previous LaTeX runs:

65 ⟨∗exclasslast⟩
66 `\documentclass[a4paper,10pt,twoside,twosidepapers,`
67 `  compil=last,headers=exceptpdf,electronic,`
68 `  citecolor=colorforcite,linkcolor=colorforlink,urlcolor=colorforurl,`
69 `  pagecolor=colorforpage]{confproc}`
70 ⟨/exclasslast⟩

4.2 Main file

71 ⟨∗example⟩

4.2.1 Using the confproc class

The class is to be called as would have been the `book.cls`. Here is a basic example:

72 `%%\documentclass[a4paper,10pt,twoside,twosidepapers,%`
73 `%%  compil=bibbackref,headers=allpages,movepagenumbers,electronic,%`
74 `%%  citecolor=colorforcite,linkcolor=colorforlink,urlcolor=colorforurl,%`
75 `%%  pagecolor=colorforpage]{confproc}`

However, as explained in the previous section, we simplified the switch between class options during all LaTeX runs (in the Unix script) by using 2 files (`exclasspre.tex` and `exclasslast.tex`). The class is defined in those two files with different options set, and each one is temporary renamed as `exclass.tex`, and then simply inserted as:

76 `\input{exclass}`

So, the document class is `confproc`. The standard options a4paper, 10pt and twoside are simply passed to the book `class` used in background. We then provide some `confproc` options: twosidepapers to clear double pages after papers with an odd number of pages, compil=bibbackref specifying that this compilation is not the last, but one that generates proper back references for the general bibliography; headers=allpages that adds a header and footer to all pages (including papers inserted); movepagenumbers that moves the page numbers so that we can compare the ones of the proceeding with thoses of the inserted papers; electronicÂă to get color links, together with the four colors we use.

4.2.2 Use extra packages

Then, one should define the extra packages to be used.
Important note: any package that redefines LaTeX macros should be inserted before `hyperref`. At present, `confproc` does not provide any mechanism for

this. Then, adding other such packages may result in bad surprises. A good temporarily solution would be to add them in the class definition itself... which is not a satisfactory solution yet.

At the beginning of proceedings, there often are welcome letters, which texts are not as dense as the papers themselves. Therefore, you may change the line spacing of those letters using the `setspace` package:

```
\usepackage{setspace}
```

You then may change the input and font encodings, for instance to allow for running LaTeX on a document with accents (in the list of authors and paper titles):

```
\usepackage[utf8]{inputenc}
\usepackage[T1]{fontenc}
```

Also, you may change the default LaTeX font to the Times font, as it displays better in PDF files:

```
\usepackage{times}
```

In the specific case of DAFx-06 proceedings, the headers had to contain a '9$^{\text{th}}$', that requires:

```
\usepackage{nth}
```

You may wish to finely tune your document layout, using the `layout` package:

```
\usepackage{layout}
```

Similarly, you may change the fine tuning of the table of contents layout, in which case the `layouts` package is for you:

```
\usepackage{layouts}
```

However, if the table of contents layout is printed too early, it will not properly display its layout...

4.2.3 Define colors for links

We now choose the colors used for the PDF links:

```
\definecolor{colorforlink}{rgb}{0,0,0.8}
%%\definecolor{colorforpage}{rgb}{0,0,0.7}
\definecolor{colorforcite}{rgb}{0,0.8,0}
\definecolor{colorforurl}{cmyk}{1,0,0,0}
```

4.2.4 Customize proceedings' commands

We then customize the text for headers and footers, and second version of footer for checking page numbering.

```
\renewcommand{\proclhead}{{\em \small{Proc.~of the 9\textsuperscript{th} %
Int.~Conference on Digital Audio Effects (DAFx-06), Montreal, %
Canada, September 18-20, 2006}}}
\renewcommand{\proccfoot}{{\vskip 11mm}{\small DAFX-\thepage}}
\setlength{\procoptfootskip}{3mm}
```

As `confproc` is to be used with pdfLaTeX, we customize the PDF metadata:

```
\renewcommand{\procpdfauthor}{Vincent Verfaille, McGill University}
\renewcommand{\procpdftitle}{DAFx-06 Proceedings}
\renewcommand{\procpdfsubject}{Proc. of the 9th Int. Conf. on%
  Digital Audio Effects - Montreal, Quebec, Canada}
```

Note that an alternative way to change the PDF metadata consist in using the `\hypersetup` command (see the `hyperref` package). If you wish to change the title for the general bibliography and the index, redefine:

```
\renewcommand{\bibname}{Full Bibliography}
\renewcommand{\indexname}{Index of Authors}
```

4.2.5 Declare bibliographic files

We chose to define the name of bibliography file to be used at the beginning, providing all customization commands at the same place:

```
\newcommand{\procbibfile}{\BIBPATH exbiblio}
```

If you also make a general bibliography, you may use several files (see sec. 5.1.4), for instance one for common bibliography items, one with the other bibliography items and another one with common strings for journals, conferences, etc.

4.2.6 Declare paths to pictures, papers, texts...

We then declare paths to folders in which other files included by the `example.tex` file when compiled: pictures (containing logos used in your first page and welcome letters, for instance), bibliographies (containing the 3 files included as explained earlier), papers (containing both the PDFs of the papers and all related folders to allow to batch re-compile them all at once), and texts (containing publishing informations, welcome letters, the paper switch, etc.):

```
\newcommand{\PICTPATH}{pictures/}
\newcommand{\BIBPATH}{}
\newcommand{\PAPERPATH}{papers/}
\newcommand{\TEXTPATH}{}
```

4.2.7 Fine tune the document layout

We then provide information about the default values for fine tuning the proceedings layout in letter format, so that they look as much possible as the one of the paper template. You have to check in the paper templates which settings are used, and to change the following lines accordingly.

```
\oddsidemargin  -4.95truemm
\evensidemargin -10.95truemm
\topmargin 0truept
\headheight 12truept
\footskip 0truept
\textheight 229truemm
\textwidth 175truemm
```

```
\voffset -28truept
\headsep 20truept
```

Then, set the left/right and up/down shift of the inserted PDFs files:

```
\setlength{\LaTeXxShift}{8.45pt}
\setlength{\LaTeXyShift}{-3pt}
\setlength{\WordxShift}{10pt}
\setlength{\WordyShift}{-40pt}
```

An example for the provided example in A4 format is given in sec. 3.3.4.

4.2.8 Make the index

The last step of the preamble is to make the index:

```
\makeindex
```

4.2.9 Start the document: front matter

We can now start the document and its front matter by using:

```
%%%==========  PROCEEDINGS  ==========
\begin{document}
\frontmatter
```

4.2.10 Display the document layout

To check your document layout (thanks to the `layout` package), uncomment:

```
%%\layout
```

You can also specifically check the table of contents layout (thanks to the `layouts` package), by uncommenting:

```
%%\begin{figure}
%%    \setlayoutscale{0.8} \tocdiagram
%%    \caption{Table of Contents entry parameters} \label{fig:tocp}
%%\end{figure}
%%\begin{figure}
%%    \setlayoutscale{0.8} \currenttoc \tocdesign
%%    \caption{Typical Table of Contents entry for this document}
%%    \label{fig:thistoc}
%%\end{figure}
```

You can either insert them at the end of the document (not changing page numbering, but you may forget them as you do not so often check the last page) or at its beginning (changing page numbering but being the first page you see when opening it). You may then go to the next right-opening page, using:

```
%%\clearsingleordoublepage
```

You may then ensure that the cover, first page of the proceedings, is numbered 1:

```
\setcounter{page}{1}
```

4.2.11 Cover page

We now add a bookmark chapter in the front matter:

```
\pdfbookmark[0]{Preamble}{preamble}
```

That way, we ensure that all the sections in the front matter/preamble (cover page, welcome letters, etc) except the table of contents appear in a same bookmark as sub-items, thus reducing the number of lines appearing that do not deal with days, sessions, papers, etc. Note that we do it by hand. This is not as beautiful and general as if the class was doing it for you (which could have been done); however, not automatizing this bookmark entry allows the proceedings editor to decide if he wishes to link to the first pages or not.

We then include the first page and generate its bookmark entry:

```
\pdfbookmark[1]{Cover}{cover}
\author{Bob, Department of blah blah blah}
\title{Proceedings of the blah blah blah}
\date{\today}
\maketitle
```

Instead of using the usual `\maketitle` command, we could also have included a PDF image of the first page using:

```
%\includepdf[noautoscale,pages=1,link]{\PICTPATH ex_1stpage.pdf}
```

4.2.12 Publishing informations

Publishing informations are then given on page 2, inside the cover.

```
\newpage
\vspace*{1.7cm}
\pdfbookmark[1]{Publishing informations}{publishing}
```

As it is printed on page 2, there are no header nor footer on this page.

```
\thispagestyle{empty}
```

We then provide the publishing information itself:

```
\noindent {\bf Published by:}\\ Laboratory Name\\ Department name\\
School Name\\ University Name\\
\url{http://www.conferencesite.com}\\
```

We also indicate the ISBN number:

```
\vspace*{0.15cm}\newline
\noindent {\bf ISBN: X-XXXX-XXXXXX}\\
```

and the credits:

```
\vspace*{0.35cm}\newline
\noindent {\bf Credits:}\\
Cover design: Firstname Lastname\\
Logo photo: Firstname Lastname\\
\LaTeX{} editor: Firstname Lastname\\
```

Isn't it a good place for you to acknowledge for the time spent working on this time-saving package? Even though you do not have to include my name, the best way to share the word about the `confproc` package is to name it!

```
using \LaTeX's 'confproc' class (optional: by V. Verfaille)\\
```

You may then indicate where and when you proceedings were printed:

```
\vspace*{0.35cm}\newline
\noindent  Printed in City by Print-Company --- Month 20XX
```

4.2.13 Welcome letters

To ensure next page is numbered and has proper headers/footers, use:

```
\otherpagestyle
```

Roman page numbers now start to appear. We include all welcome letters[8]:

```
%%%-- Welcome letters
\clearsingleordoublepage
\vspace*{0.6cm}
\thisotherpagestyle
```

We create the bookmark entry by hand (so that you can remove it):

```
\pdfbookmark[1]{Welcome from Firstname Lastname}{welcome}
```

and the corresponding section (and table of contents entry):

```
\section*{Welcome from Firstname Lastname,  Conference Chair}
```

Depending on the text length, you may use either 1.5 line spacing:

```
\onehalfspace
\vspace*{1.1cm}
\begin{center}
\begin{minipage}[h]{14cm}
Text of the welcome letter, with 1.5 lines spacing, bla bla bla...
Text of the welcome letter, with 1.5 lines spacing, bla bla bla...
Text of the welcome letter, with 1.5 lines spacing, bla bla bla...
\end{minipage}
\end{center}
```

or double line spacing (both are using the `setspace` style):

```
\doublespace
\begin{center}
\begin{minipage}[h]{14cm}
Text of the welcome letter, with 2 lines spacing, bla bla bla...
Text of the welcome letter, with 2 lines spacing, bla bla bla...
Text of the welcome letter, with 2 lines spacing, bla bla bla...
\end{minipage}
\end{center}
```

Do not forget to switch back to normal spacing after welcome letters:

```
\singlespace
```

[8] There is only one in this example, but there could be others: from the faculty dean, the department dean, the conference chair, etc.

4.2.14 Table of contents

Let us then insert the proceedings program, or table of contents:

```
\tableofcontents
```

Note that the bookmark entry is automatically generated for the table of contents.

4.2.15 Proceedings!

We then switch to the main matter and to arabic page numbering:

```
%%%==== BEGINNING OF PAPERS ====
\mainmatter
```

It automatically changes the style for entries in the table of contents. Then, we include the file containing the papers switch, with informations about all the papers:

```
\input{\TEXTPATH expapersswitch}
```

We now insert papers by days and sessions. A day is a part, a session is a chapter and a paper is a section (in the bookmark), and they are declared as follows:

```
%%%== Day 1
\procday{Day 1}
%%%-- session 1
\session{Oral Session 1}
```

Papers are simply inserted as:

```
\paperid{45}{p_001}
\paperid{21}{p_003}
```

Let us also insert a poster session with one paper:

```
%%%-- session 2
\session{Poster Session 1}
\paperid{33}{p_005}
```

and a second oral presentations session with two more papers:

```
%%%== Day 2
\procday{Day 2}
%%%-- session 3
\session{Oral Session 2}
\paperid{75}{p_007}
\paperid{27}{p_009}
```

When we are done with the insertion of all papers, we switch to the back matter of the document (*i.e.* bibliography and index of authors):

```
%%%==== END OF PAPERS ====
\backmatter
```

It automatically changes to its corresponding style for the entries in the table of contents.

4.2.16 General bibliography

The general bibliography is inserted with the following style:

```
\bibliographystyle{newapave}
```

This style is a modification of the `newapa` style: the year is indicated at the end, before the back-references, instead of being between parenthesis right after the list of authors. In the case you do not wish to use the one developed for DAFx-06 but prefer the `newapa` style, you then need to replace this last line by:

```
\bibliographystyle{newapa}
```

and to edit the class at the `newapave` package insertion.

We now cite the `{bib:intro}` bib item (does not appear in the document) to allow for customizing the paragraph introducing the general bibliography:

```
\nocite{bib:intro}
```

The bibliography is then inserted:

```
{\footnotesize\bibliography{\procbibfile}}
```

Note that the general bibliography may be very long. Changing the font size (for instance to `\footnotesize` as in the previous line) may then be a good idea.

4.2.17 Index of authors

We finally insert the index:

```
\insertindex
\end{document}
⟨/example⟩
```

4.3 Paper switch!

Let us now take a look at the paper switch, which is central to the proceedings. In fact, it contains a switch to all proceedings papers, so that you can work on the proceedings itself without knowing yet the final order of papers!

4.3.1 First way: redefining local commands

We define the `\paperid` command:

```
⟨∗expapersswitch⟩
\newcommand{\paperid}[2]{
```

Inside the switch, the `\paperswitch` command is set to the paper reference:

```
\renewcommand{\paperswitch}{#1}
```

We then define the insertion command for the paper with ID=01:

```
%========== PAPER ID = 45 ==========
\ifnum\paperswitch=45 {
```

For this first paper inclusion, we chose to use intermediary commands:

```
\renewcommand{\papertitle}{Templates for One Author}
\renewcommand{\paperauthors}{Alfred Alabama}
\renewcommand{\paperindex}{\index{Alabama, Alfred}}
\renewcommand{\paperref}{\paperswitch}
\renewcommand{\paperpagenum}{6}
\renewcommand{\papercite}{Serra:1996:sms,%
  Moorer:2000:AES:audio:millenium,Arfib:1998:DAFx,%
  Mitra:Kaiser:1993:DSP:handbook}
```

We use the `\procinsertpaper` command to insert papers. It has 9 arguments:

1. X and Y shifts (with a space in between, as in `{10 12}`);
2. the number of pages;
3. the paper reference;
4. the title;
5. the list of authors;
6. the index entries;
7. the citations for the general bibliography;
8. the name of the PDF file to insert;
9. the bookmark entries for the authors.

```
  \procinsertpaper{\LaTeXxShift{} \LaTeXyShift}{\paperpagenum}%
    {\paperref}{\papertitle}{\paperauthors}{\paperindex}{\papercite}%
    {#2}{\pdfbookmark[2]{Alfred Alabama}{#2.author1}}}
\fi
```

4.3.2 Second way: shorter but less readible

Even though less readible, it may be shorter not to redefine local commands, and to directly pass arguments to the `\procinsertpaper` command. This is presented in the next example, and corresponds to what is provided by the Perl script (see sec. 4.4.3) that converts the .csv data into LaTeX code to insert in this current file:

```
%========== PAPER ID = 21 ===========
\ifnum\paperswitch=21
  \procinsertpaper{\LaTeXxShift{} \LaTeXyShift}{5}{\paperswitch}%
    {Templates for One Author with Two Affiliations}% paper title
    {Bob Boogie-Woogie}% list of authors
    {\index{Boogie-Woogie, Bob}}% authors index entries
    {Serra:1996:sms,Moorer:2000:AES:audio:millenium,%
      Arfib:1998:DAFx,Haykin:1991:adaptive:filter}%
    {#2}{\pdfbookmark[2]{Bob Boogie-Woogie}{#2.author1}}
\fi

```

```
%========== PAPER ID = 27 ==========
\ifnum\paperswitch=27
  \procinsertpaper{\LaTeXxShift{} \LaTeXyShift}{7}{\paperswitch}%
    {Templates f\'or F\‘o\"ur ÃĂuthors}%
    {J\o{}hn J\"oe, K\'e\~{n}t K\^{\i}ng, L\‘ou L\'ou, %
      M\‘anfr\'ed J. M\^ost\u{e}k\i}%
    {\index{J\"oe, J\o{}hn}\index{K\^{\i}ng, K\'e\~{n}t}%
      \index{L\'ou, L\‘ou}\index{M\^ost\u{e}k\i, M\‘anfr\'ed J.}}%
    {Serra:1996:sms,Moorer:2000:AES:audio:millenium,%
      Dutilleux:1991,Fitz:Haken:2003:Web:morphing:loris}%
    {#2}{\pdfbookmark[2]{J\o{}hn J\"oe}{#2.author1}%
      \pdfbookmark[2]{K\'e\~{n}t K\^{\i}ng}{#2.author2}%
      \pdfbookmark[2]{L\‘ou L\'ou}{#2.author3}%
      \pdfbookmark[2]{M\‘anfr\'ed J. M\^ost\u{e}k\i}{#2.author4}}
\fi

%========== PAPER ID = 33 ==========
\ifnum\paperswitch=33
  \procinsertpaper{\LaTeXxShift{} \LaTeXyShift}{4}{\paperswitch}%
    {Templates for Two Authors}%
    {Alfred Alabama, Chris Christmas}%
    {\index{Alabama, Alfred}\index{Christmas, Chris}}%
    {Serra:1996:sms,Moorer:2000:AES:audio:millenium,%
      Arfib:1998:DAFx,Askenfelt:1976:automatic:transcription}%
    {#2}{\pdfbookmark[2]{Alfred Alabama}{#2.author1}%
      \pdfbookmark[2]{Chris Christmas}{#2.author2}}
\fi

%========== PAPER ID = 75 ==========
\ifnum\paperswitch=75
  \procinsertpaper{\LaTeXxShift{} \LaTeXyShift}{6}{\paperswitch}%
    {Templates for Three Authors}%
    {Bob Boogie-Woogie, Chris Christmas, Don Didon}%
    {\index{Boogie-Woogie, Bob}\index{Christmas, Chris}%
      \index{Didon, Don}}%
    {Serra:1996:sms,Moorer:2000:AES:audio:millenium,%
      Arfib:1998:DAFx,Egozy:1995:MIT:features:gesture}%
    {#2}{\pdfbookmark[2]{Bob Boogie-Woogie}{#2.author1}%
      \pdfbookmark[2]{Chris Christmas}{#2.author2}%
      \pdfbookmark[2]{Don Didon}{#2.author3}}
\fi
}
⟨/expapersswitch⟩
```

If you do not use the `pd1enc.def` file if you want `hyperref` to correctly convert all accents[9] in the PDF file, such messages will appear at LaTeX runs:

```
Package hyperref Warning: Glyph not defined in PD1 encoding,
(hyperref)                removing ‘\u’ on input line 184.
```

[9] and there are many beautiful accents in non-english languages :-).

4.3.3 Get page numbers and recompile all papers

In the case where your papers have headers/footers, you may have to recompile them all with the proper page numbers. Before doing so, compile the proceedings enough times so that the table of contents is generated and inserted. Then, use the page number indicated for each paper to edit accordingly the `expages.tex` file. An example is provided here:

```
⟨*expages⟩
\newcommand{\setpagenumber}[1]{
  \newcommand{\paperswitch}{#1}
    \ifnum\paperswitch=01 {\setcounter{page}{1}}\fi
    \ifnum\paperswitch=02 {\setcounter{page}{7}}\fi
    \ifnum\paperswitch=03 {\setcounter{page}{13}}\fi
    \ifnum\paperswitch=04 {\setcounter{page}{17}}\fi
    \ifnum\paperswitch=05 {\setcounter{page}{23}}\fi
}
⟨/expages⟩
```

You may then recompile all papers (use the `buildpapers` Unix script, see sec. 4.6.1), provided that they all have the corresponding line in their preamble:
`\input{../../expages.tex}\setpagenumber{01}`
where `01` is the paper reference (to be changed for each paper). Using the following:
`\setcounter{page}{1}`
would of course have the equivalent effect, except that you would have to re-edit each paper after changing your program order.

4.4 Generate the conference program

4.4.1 Organize the conference program by sessions of by day?

Depending on the size of your conference, you may only have a few sessions during 2 or 3 days, or many sessions during 4 to 7 days (or even more). Then, you need to choose wether you want to organize the table of contents and the bookmarks:

- by sessions and then by related papers; or
- by day, then by sessions and then by papers (in the case of long conferences where the list of sessions may be too long in the PDF bookmark);

The mechanism used in `confproc` is based on section levels: days are inserted in the table of contents and bookmarks as parts, whereas sessions are inserted as chapters and papers as sections.

Note that the `confproc` does not handle programs with parallel sessions. It is then up to you to decide in which order they may appear in the table of contents.

Program organized by sessions For a small size conference, if not using days (comment the `\procday` lines in the example), you will obtain the table of contents corresponding to Tab 3. The corresponding bookmark is depicted closed in Tab. 4, opened at its first level in Tab. 5, and opened at its second level in Tab. 6.

Conference Program

Oral Session 1

1 Templates for One Author
Alfred Alabama

7 Templates for One Author with Two Affiliations
Bob Boogie-Woogie

Poster Session 1

11 Templates for Two Authors
Alfred Alabama, Chris Christmas

Oral Session 2

15 Templates for Three Authors
Bob Boogie-Woogie, Chris Christmas, Don Didon

21 Templates fór Fòür Àuthors
John Jöe, Kéñt Kîng, Lòu Lóu, Mànfréd J. Môstěki

27 **Full Bibliography**

28 **Index of Authors**

Table 3: *Example of table of contents for a conference organized by sessions.*

▶ Preamble
Program
▶ Oral Session 1
▶ Poster Session 1
▶ Oral Session 2
Full Bibliography
Index of Authors

Table 4: *Closed bookmarks for a conference organized by sessions.*

- ▼ Preamble
  - Cover
  - Publishing informations
  - Welcome from Firstname Lastname
- Program
- ▼ Oral Session 1
  - ▶ Template for One Author
  - ▶ Template for One Author with Two Affiliations
- ▼ Poster Session 1
  - ▶ Template for Two Authors
- ▼ Oral Session 2
  - ▶ Template for Three Authors
  - ▶ Template fór Fòür Àuthors
- Full Bibliography
- Index of Authors

Table 5: *First-level opened bookmarks for a conference organized by sessions.*

- ▼ Preamble
  - Cover
  - Publishing informations
  - Welcome from Firstname Lastname
- Program
- ▼ Oral Session 1
  - ▼ Template for One Author
    - Alfred Alabama
  - ▼ Template for One Author with Two Affiliations
    - Bob Boogie-Woogie
- ▼ Poster Session 1
  - ▼ Template for Two Authors
    - Alfred Alabama
    - Chris Christmas
- ▼ Oral Session 2
  - ▼ Template for Three Authors
    - Bob Boogie-Woogie
    - Chris Christmas
    - Don Didon
  - ▼ Template fór Fòür Àuthors
    - John Jöe
    - Kéñt Kîng
    - Lòu Lóu
    - Mànfred J. Môstěkı
- Full Bibliography
- Index of Authors

Table 6: *Second-level opened bookmarks for a conference organized by sessions.*

Program organized by days In the case of bigger conferences with a program organized by day, you will get the table of contents corresponding to Tab 7. The corresponding bookmark is depicted closed in Tab. 8, opened at its first level in Tab. 9, and opened at its second level Tab. 10.

Table 7: *Example of table of contents for a conference organized by day.*

Table 8: *Closed bookmarks for a conference organized by days.*

▼ Preamble
  Cover
  Publishing informations
  Welcome from Firstname Lastname
Program
▼ Day 1
▶ Oral Session 1
▶ Poster Session 1
▼ Day 2
▶ Oral Session 2
Full Bibliography
Index of Authors

Table 9: *First-level opened bookmarks for a conference organized by days.*

▼ Preamble
  Cover
  Publishing informations
  Welcome from Firstname Lastname
Program
▼ Day 1
▼ Oral Session 1
▶ Template for One Author
▶ Template for One Author with Two Affiliations
▼ Poster Session 1
▶ Template for Two Authors
▼ Day 2
▼ Oral Session 2
▶ Template for Three Authors
▶ Template fór Fòür Àuthors
Full Bibliography
Index of Authors

Table 10: *Second-level opened bookmarks for a conference organized by days.*

4.4.2 CSV Program of the conference

It may be easier for you to collect data about the papers from a server, manipulate them in a spreadsheet software (for example M$ Excel), and then generate the program from a `.csv` file. We used a Perl script (see sec. 4.4.3) to generate the corresponding `.tex` files for the example. First, take a look at the following CSV file, that contains the conference program for the example[10]:

290 ⟨∗exprogram⟩
291 `Type,Paper Number,PC Decision,Pages,Title,File Name,Generated,Citations,Auth1 First Name,Auth1 L`
292 `Type,-2,0,,,,,,First Name,Last Name,First Name,Last Name,First Name,Last Name, F.Name, L.Name,,`
293 `Day,0,,,Day 1: September 18 2007,,,,,,,,,,,,`
294 `Session,0,,,Oral Session 1,,,,,,,,,,,,`
295 `paper,45,0,6,Templates for One Author,p_001,LaTeX,"Serra:1996:sms,Moorer:2000:AES:audio:milleniu`
296 `paper,21,0,5,Templates for One Author with Two Affiliations,p_003,LaTeX,"Serra:1996:sms,Moorer:1`
297 `Poster Session,0,,,Poster Session 1,,,,,,,,,,,,`
298 `paper,32,P,4,Templates for Two Authors,p_005,LaTeX,"Serra:1996:sms,Moorer:2000:AES:audio:millen`
299 `Day,0,,,Day 2: September 19 2007,,,,,,,,,,,,`
300 `Session,0,,,Oral Session 2,,,,,,,,,,,,`
301 `paper,75,0,6,Templates for Three Authors,p_007,LaTeX,"Serra:1996:sms,Moorer:2000:AES:audio:mille`
302 `paper,27,0,7,Templates fÃşr FÃšÃijr ÃĂuthors,p_009,LaTeX,"Serra:1996:sms,Moorer:2000:AES:audio:m`
303 ⟨/exprogram⟩

As we expect when reading the first line, it contains the following columns:

1. **Type:** the script will accept the following values:
   - use `Type` for the items to ignore;
   - Day: use `Day`;
   - Session: use `Session` or `Paper Session` or `Oral Session` for oral sessions, `poster session` for Poster Sessions, and `Demo Session` for demo sessions;
   - Paper: use `paper` or `oral` for oral presentation; `poster` for poster presentation; `demo` for demo. The 3 output identical code anyway: it only helps to organize the program!.

   Note that theses values are not case sensitively processed by the Perl script.
2. **Number:** paper number or reference, often generated by the submission system. It will be used for paper insertion, for ordering the program, etc.
3. **PC Decision:** `oral` or `poster`. it does not change the LaTeX generated code, so you may not use it;
4. **Pages:** number of pages;
5. **Title:** title;

[10] This is normal that this text goes on after the margin. Please check the generated file if you wish to read each line.

6. **File Name:** name of the corresponding `.pdf` file;
7. **Generated:** `LaTeX` for LaTeX generated files, and `Word` for Word generated file. This allows to use different X and Y offset values (we however used the same value for all papers of one kind);
8. **Citations:** list of bibliography items for the general bibliography (ex: `\cite{bibitem1,bibitem2,bibitem3}`); blank if no general bibliography;
9. **Auth1 First Name:** first name of author 1;
10. **Auth1 Last Name:** last name of author 1;
11. **Auth2 First Name:** first name of author 2, blank if none;
12. **Auth2 Last Name:** last name of author 2, blank if none;
13. **Auth3 First Name:** first name of author 3, blank if none;
14. **Auth3 Last Name:** last name of author 3, blank if none;
15. **Auth4 First Name:** first name of author 4, blank if none;
16. **Auth4 Last Name:** last name of author 4, blank if none;
17. **comments:** there is an extra column, that is not used by the script.

4.4.3 Perl script to generate the paper switch and program

```
⟨*procswitchandtoc⟩
#!/usr/bin/perl -w

# procswitchandtoc.pl
#    created as dafxproctoc.pl by Marz Zadel, 2006-04-28
#    modified for confproc.cls by Vincent Verfaille, 2007-08-08
# Execute as
# ./procswitchandtoc.pl < intputfile.txt >

use strict;
use Text::ParseWords;
open(SWI, ">expapersswitch.tex"); #open for write, overwrite
open(SESSIONS, ">exsessions.tex"); #open for write, overwrite

# ----- Configuration
# field separator for the input file
my $fieldseparator=',';

# mac line endings: "\r"  / Unix line endings: :\n"
$/ = "\n";  # line endings for the input file
$\ = "\n";  # line endings for the output file

# ----- Subroutines
```

```
# -- split one line of input into a hash with named fields
sub parseinputline {
  my ($inputline) = @_;

  # escape single quotes on the input line: they interfere with quotewords()'s
  # quote handling (ie, they start to quote stuff)
  $inputline =~ s/'/\\'/g;

  # parse the input line
  my @wordlist = &quotewords($fieldseparator, 0, $inputline);

  # replace accented characters with latex escaped equivalents. To be done after
  # quotewords() so the '\' don't get interpreted by quotewords() as escapes
  foreach my $word ( @wordlist ) {
    if ( $word ) { $word = &latexifyaccentedcharacters($word); }
  }

  # extract the fields into local variables. Author names stored as a list
  my ($type, $number, $pcdecision, $nbpages, $title, $filename,
      $generatedfrom, $cite) = @wordlist;

  # remove the first 8 elements (just parsed out), leaving only author names.
  # reminder: list of 8 scalars, though some may be "" if less than 4 authors
  splice( @wordlist, 0, 8 );

  # store the author names as a list of lists. We end up with a list that looks
  #  like ((Udo,Zoelzer),(Daniel,Arfib))
  my @authors = ();
  while ( $wordlist[0] ) {
    push( @authors, [splice( @wordlist, 0, 2 )] );
    # "splice( @wordlist, 0, 2 )": cuts the first 2 scalars off of @wordlist
    # and returns them; calling [splice(@wordlist,0,2)] returns a *reference*
    # to a list containing the first two scalars. (see perldoc perldsc.)
  }

  # create a hash reference containing the named fields and return it
  my $fields = {
    type    => $type,
    number    => $number,
    pcdecision  => $pcdecision,
    nbpages     => $nbpages,
    title     => $title,
    generatedfrom => $generatedfrom,
    filename  => $filename,
    cite    => $cite,
    authors   => \@authors,
  };
  return $fields;
}

```

```
377 # -- takes a string in Mac OS Roman encoding and encode the accented
378 #  characters with latex escapes (only for a subset of available characters).
379 sub latexifyaccentedcharacters {
380   # for mapping between unicode and mac os western encoding, see:
381   # http://www.unicode.org/Public/MAPPINGS/VENDORS/APPLE/ROMAN.TXT
382   my ($inputstring) = @_;
383   $inputstring =~ s/\x8a/\\"a/g;  # \"a: unicode 0xe4, mac os western 0x8a
384   $inputstring =~ s/\x87/\\'a/g;  # \'a: unicode 0xe9, mac os western 0x87
385   $inputstring =~ s/\x88/\\`a/g;  # \`a: unicode 0xe8, mac os western 0x88
386   $inputstring =~ s/\x8e/\\'e/g;  # \'e: unicode 0xe9, mac os western 0x8e
387   $inputstring =~ s/\x8f/\\`e/g;  # \`e: unicode 0xe8, mac os western 0x8f
388   $inputstring =~ s/\x91/\\"e/g;  # \"e: unicode 0xeb, mac os western 0x91
389   $inputstring =~ s/\x97/\\'o/g;  # \'o: unicode 0xf3, mac os western 0x97
390   $inputstring =~ s/\x98/\\`o/g;  # \`o: unicode 0xf2, mac os western 0x98
391   $inputstring =~ s/\x9a/\\"o/g;  # \"o: unicode 0xf6, mac os western 0x9a
392   $inputstring =~ s/\x99/\\^o/g;  # \^o: unicode 0xf4, mac os western 0x99
393   $inputstring =~ s/\xbf/\\o /g;  # \o:  unicode 0xf8, mac os western 0xbf
394   $inputstring =~ s/\x96/\\~n /g;  # \~n:  unicode 0xF1, mac os western 0x96
395   $inputstring =~ s/\x94/\\^{\\i}/g;  # \^{\i}: unicode 0xee, mac os western 0x94
396   $inputstring =~ s/\x/\\i/g;  # \i: unicode , mac os western
397   $inputstring =~ s/\x9f/\\"u/g;  # \"u: unicode 0xfc, mac os western 0x9f
398   $inputstring =~ s/\x5c/\\/g;  # \: unicode 0x5C, mac os western 0x5C
399
400   return $inputstring;
401 }
402
403 # -- output the information for a day
404 sub outputdaylatex {
405   my ($fields) = @_;
406   my $sessiontitle = $fields->{'title'};
407   open(SESSIONS, ">>exsessions.tex"); #open for append
408   print SESSIONS ' ';
409   print SESSIONS '%%%== Day';
410   print SESSIONS '\procday{', $sessiontitle, '}'
411 }
412
413 # -- output the information for a session line
414 sub outputsessionlatex {
415   my ($fields) = @_;
416   my $sessiontitle = $fields->{'title'};
417   open(SESSIONS, ">>exsessions.tex"); #open for append
418   print SESSIONS ' ';
419   print SESSIONS '%%%-- session';
420   print SESSIONS '\session{', $sessiontitle, '}'
421 }
422
423 # -- in: ref. to a list of lists of author names ((Udo,Zoelzer),(Daniel,Arfib))
424 # out: ref. to a Perl list w/ entries "Udo Zoelzer" and "Daniel Arfib" (no quotes)
425 sub authorsbyfirstname {
426   my ($authors) = @_;
```

```
427   # generate a list of full "first last" author names
428   my @authorlistbyfirstname = map { "$_->[0] $_->[1]" } @$authors;
429   return \@authorlistbyfirstname; # return a ref. to the new list of authors
430 }
431
432 # -- in: ref. to a list of lists of author names ((Udo,Zoelzer),(Daniel,Arfib))
433 # out: ref. to a Perl list w/ entries "Zoelzer, Udo" and "Arfib, Daniel"
434 sub authorsbysurname {
435   my ($authors) = @_;
436   # generate a list of authors with surnames written first
437   my @authorlistbysurname = map { "$_->[1], $_->[0]" } @$authors;
438   return \@authorlistbysurname; # return a ref. to the new list of authors
439 }
440
441 # -- in: ref. to a list of author names: "Zoelzer, Udo" and "Arfib, Daniel"
442 # out: LaTeX index entries: "\index{Zoelzer, Udo}\index{Arfib, Daniel}"
443 sub genindex {
444   my ($authorsbysurname) = @_;
445   my @indexentries = map { "\\index{$_}" } @$authorsbysurname;
446   return join('', @indexentries);
447 }
448
449 # -- in: ref. to a list of author names: "Zoelzer, Udo" and "Arfib, Daniel"
450 # out: bookmarks cmds: "\pdfbookmark[2]{Udo Zoelzer}{#2.Udo Zoelzer}
451 # \pdfbookmark[2]{Daniel Arfib}{#2.Daniel Arfib}"
452 sub genbookmark {
453   my ($authorsbyfirstname) = @_;
454   my @indexentries = map { "\\pdfbookmark[2]{$_}{#2.$_}" }
455       @$authorsbyfirstname;
456   return join('', @indexentries);
457 }
458
459 # -- output the information for a paper line
460 sub outputpaperlatex {
461   my ($fields) = @_;
462   open(SWI, ">>expapersswitch.tex"); #open for append
463   print SWI '%========== PAPER ID = ', $fields->{'number'}, ' ==========';
464   print SWI '\ifnum\paperswitch=', $fields->{'number'};
465   print SWI '  \procinsertpaper{\LaTeXxShift{} \LaTeXyShift}{',
466     $fields->{'nbpages'}, '}{\paperswitch}%';
467   print SWI '  {', $fields->{'title'}, '}% paper title';
468   print SWI '  {', join( ', ', @{&authorsbyfirstname($fields->{'authors'})}),
469   '}% list of authors';
470   print SWI '  {', &genindex(&authorsbysurname($fields->{'authors'})),
471   '}% authors index entries';
472   print SWI '  {', $fields->{'cite'}, '}% cited bib items';
473 #  print SWI '  {#2}{\paperbookmark}';
474   print SWI '  {#2}{', &genbookmark(&authorsbyfirstname($fields->{'authors'})),'}';
475   print SWI '\fi';
476   print SWI ' ';
```

```
  open(SESSIONS, ">>exsessions.tex"); #open for write, overwrite
  print SESSIONS '\paperid{', $fields->{'number'}, '}{', $fields->{'filename'}, '}';
}

# ----- Main
# FIXME: parse a line, and confirm that all of the fields are set up properly
# --> correct number of fields, and the fields have the correct values
open(SWI, ">>expapersswitch.tex"); #open for write, overwrite
print SWI '\newcommand{\paperid}[2]{';
print SWI ' ';
print SWI '\renewcommand{\paperswitch}{#1}';
print SWI ' ';

while ( <> ) {
  chomp; # clear the newline character from the end of the line
  my $fields = &parseinputline($_);   # parse the line into fields
  # take some action depending on what type of line it is; case insensitive
  if ( lc($fields->{'type'}) eq lc('day') ) {
  &outputdaylatex($fields);
  } elsif ( lc($fields->{'type'}) eq lc('session')
      || lc($fields->{'type'}) eq lc('paper session')
      || lc($fields->{'type'}) eq lc('demo session')
      || lc($fields->{'type'}) eq lc('poster session') ) {
  &outputsessionlatex($fields);
  } elsif ( lc($fields->{'type'}) eq lc('oral')
      || lc($fields->{'type'}) eq lc('paper')
      || lc($fields->{'type'}) eq lc('demo')
      || lc($fields->{'type'}) eq lc('poster') ) {
  &outputpaperlatex($fields);
  } elsif ( lc($fields->{'type'}) eq lc('Type')) {
  } else { print '!!! a day, session or paper (',
      $fields->{'type'},') is lost by the script...';
  }
open(SWI, ">>expapersswitch.tex"); #open for append
}
print SWI '}';
close(SWI);
close(SESSIONS);
```
⟨/procswitchandtoc⟩

4.5 Common bibliography items

Let us take a look at the common bibliographic items of this example:

⟨∗exbiblio⟩
```
%-- This item generates the text under the bibliography title
@misc{bib:intro,
  Author = {~},
  Title = {\procbibintro\newline{}%
    \centerline{\underline{\hspace*{5cm}}}}}
```

```
%-- references to a book
@book{Mitra:Kaiser:1993:DSP:handbook,
  Author = {S.~K. Mitra and J.~F. Kaiser},
  Title = {Handbook for Digital Signal Processing},
  Publisher = {J. Wiley {\&} Sons},
  Year = {1993}}

@book{Haykin:1991:adaptive:filter,
  Author = {Simon Haykin},
  Title = {Adaptive Filter Theory},
  Publisher = {Prentice Hall},
  Address = {Englewood Cliffs},
  Edition = {Second},
  Year = {1991}}

%-- reference to a book chapter
@inbook{Serra:1996:sms,
  Author = {X. Serra},
  Chapter = {Musical Sound Modeling with Sinusoids plus Noise},
  Publisher = {G. D. Poli, A. Picialli, S. T. Pope and C. Roads,%
    Eds.~Swets~\&~Zeitlinger},
  Title = {Musical Signal Processing},
  Pages = {91--122},
  Year = {1996}}

%-- reference to a journal paper
@article{Moorer:2000:AES:audio:millenium,
  Author = {James A. Moorer},
  Title = {Audio in the New Millennium},
  Journal = {Journal of the {AES}},
  Volume = 48,
  Number = 5,
  Year = 2000,
  Month = may,
  Pages = {490--498}}

%-- reference to a proceeding paper
@inproceedings{Arfib:1998:DAFx,
  Author = {D. Arfib},
  Booktitle = {Proc. of the COST-G6 Workshop on Digital Audio Effects %
    (DAFx-98)},
  Title = {Different Ways to Write Digital Audio Effects Programs},
  Address = {Barcelona, Spain},
  Pages = {188--91},
  Year = {1998}}

%-- reference to a technical report
@techreport{Askenfelt:1976:automatic:transcription,
  Author = {A. Askenfelt},
  Title = {Automatic notation of played music (status report)},
```

```
  Institution = {{STL-QPSR, Vol. 1, pp. 1--11}},
  Year = {1976}}

%-- reference to a master thesis
@mastersthesis{Egozy:1995:MIT:features:gesture,
  Author = {E.~B. Egozy},
  title = {Deriving musical control features from a real-time timbre %
    analysis of the clarinet},
  School = {Massachusetts Institute of Technology},
  Year = {1995}}

%-- reference to a PhD thesis
@phdthesis{Dutilleux:1991,
  Author = {P. Dutilleux},
  School = {University of Aix-Marseille II},
  Title = {Vers la machine \‘a sculpter le son, modification en %
    temps-r\’eel des caract\’eristiques fr\’equentielles et temporelles%
    des sons},
  Year = {1991}}

%-- reference to a web page
@unpublished{Fitz:Haken:2003:Web:morphing:loris,
  Author = {K. Fitz and L. Haken},
  Title = {{Current Research in Real-time Sound Morphing}},
  Note = {Available at \href{http://www.cerlsoundgroup.org/RealTimeMorph/}%
    {http://www.cerlsoundgroup.org/RealTimeMorph/}},
  Year = {Accessed March 08, 2006}}
⟨/exbiblio⟩
```

See sec. 5.1.4 for details about the bibliography merging process.

4.6 Unix scripts

4.6.1 Compile all papers

First, you will notice that you need to make modifications to all papers, then needing to re-compile them all. For instance, you want each individual paper to have the same first page number as the one it has in the proceedings (for papers with page numbers included in the footer). Hopefully, they were all produced in LaTeX, so you can automatize the process with a Unix script, such as:

```
⟨*buildpapers⟩
#!/bin/sh

# Compile all papers with 'pdflatex' of 'latex'
#   (depending if they are in 'sources_pdftex' or 'sources_tex')
# and copy resulting pdf files in the 'papers' folder.
# Expected tree structure:
#     proceedings/papers/sources_pdftex/
#     proceedings/papers/sources_tex/
# with this script in 'proceedings/'
```

```
611
612 #--- choose if you compile from scratch or only once
613 #BUILD_TYPE=final      #recompile and re-do biblio
614 BUILD_TYPE=renumber   #recompile only once for re-numbering
615
616 #--- set system dependent variables
617 #LATEXPATH="/usr/local/teTeX/bin/i386-apple-darwin-current/" # teTeX
618 LATEXPATH="/usr/texbin/" # TexLive 2007
619
620 #--- paths
621 LATEX=$LATEXPATH"latex"
622 DVIPDF=/usr/local/bin/dvipdf
623 PDFLATEX=$LATEXPATH"pdflatex"
624 BIBTEX=$LATEXPATH"bibtex"
625 MAKEINDEX=$LATEXPATH"makeindex"
626 PROCSTY='dafx_06.sty'
627
628 #--- Compiling .tex files with pdfLaTeX
629 cd papers/sources_pdftex
630 for i in *; do
631   echo; echo; echo '=====> Compiling' $i '.tex  with pdfLaTeX <====='
632   cd $i
633   # copy the paper style (in case you changed it)
634   cp ../../$PROCSTY .
635   echo; echo '   ---> 1st compilation of ' $i '.tex'
636   $PDFLATEX $i
637   if [ $BUILD_TYPE = final ]; then
638     echo; echo '   ---> Compiling the bibliography ' $i '.tex'
639     $BIBTEX $i
640     echo; echo '   --- 2nd compilation of ' $i '.tex'
641     $PDFLATEX $i
642     echo; echo '   ---> 3rd compilation of ' $i '.tex'
643     $PDFLATEX $i
644   fi
645   #--- copy the pdf where the proceedings will be assembled
646   cp $i.pdf ../..
647   cd ..
648 done
649 #--- Compiling .tex files with LaTeX (problems related with hyperref)
650 cd ../sources_tex
651 for i in *; do
652   echo; echo; echo '=====> Compiling' $i '.tex  with LaTeX <====='
653   cd $i
654   #--- copy the paper proceedings style (if you changed the tree)
655   cp ../../$PROCSTY .
656   echo; echo '   ---> 1st compilation of ' $i '.tex '
657   $LATEX $i.tex
658   if [ $BUILD_TYPE = final ]; then
659     echo; echo '   ---> Compiling the bibliography ' $i '.tex '
660     $BIBTEX $i
```

```
    echo; echo '   ---> 2nd compilation of ' $i '.tex '
    $LATEX $i
    echo; echo '   ---> 3rd compilation of ' $i '.tex '
    $LATEX $i
  fi
  #--- produce the pdf from dvi
  $DVIPDF $i.dvi $i.pdf
  #--- copy the pdf where the proceedings will be assembled
  cp $i.pdf ../..
  cd ..
done
```
⟨/buildpapers⟩

4.6.2 Copy all PDFs papers at the right place

Eventhough the previous Unix script already does it, you may have to re-copy all PDF files at the right place (*i.e.* in 'papers/') without recompiling all the papers. This is achieved with a script such as:

⟨*buildcppdfpapers⟩
```
#!/bin/sh
cd papers/sources_tex
for i in *; do
  echo '*********' $i '*********'
  cp $i/$i.pdf ..
done
cd ../sources_pdftex
for i in *; do
  echo '*********' $i '*********'
  cp $i/$i.pdf ..
done
```
⟨/buildcppdfpapers⟩

4.6.3 Make the proceedings

This script if the most important, as it describes all compilation steps to produce the final version of the proceedings. As you can see, it requires many compilations, to create valid table of content, index, bibliography, index of authors, and proper back references from the bibliography. It also manages for you the renaming of the class insertion file, so that you do not need anymore to run a last time by hand after changing the compil=backref option to compil=last (as this option change, and others, are in the `exclasspre.tex` and `exclasslast.tex` files).

⟨*buildproc⟩
```
#!/bin/sh

#--- set user dependent file name
TEXFILE="example"
#--- set system dependent variables
#LATEXPATH="/usr/local/teTeX/bin/i386-apple-darwin-current/" # for teTeX
```

```
693 LATEXPATH="/usr/texbin/" # for TexLive 2007
694 #--- set compilers' paths
695 PDFLATEX=$LATEXPATH"pdflatex"
696 BIBTEX=$LATEXPATH"bibtex"
697 MAKEINDEX=$LATEXPATH"makeindex"
698
699 #--- Compile
700 echo; echo; echo '*** bash: copying class insertion file ***'
701 cp exclasspre.tex exclass.tex
702 echo; echo; echo '*** PdfLaTeX: create toc (1/7) ***'
703 $PDFLATEX  $TEXFILE.tex
704 echo; echo; echo '*** Bibtex: generate the general biblio. (2/7) ***'
705 $BIBTEX $TEXFILE
706 echo; echo; echo '*** Makeindex: create index of authors (3/7) ***'
707 $MAKEINDEX -s confproc.ist $TEXFILE.idx
708 echo; echo; echo '*** PdfLaTeX: create toc + include index (4/7) ***'
709 $PDFLATEX $TEXFILE.tex
710 echo; echo; echo '*** PdfLaTeX: create backrefs (5/7) ***'
711 $PDFLATEX $TEXFILE.tex
712 echo; echo; echo '*** PdfLaTeX: give proper toc and backrefs (6/7) ***'
713 $PDFLATEX $TEXFILE.tex
714 echo; echo; echo '*** bash: copying class insertion file ***'
715 cp exclasslast.tex exclass.tex
716 echo; echo; echo '*** PdfLaTeX: full papers (mod. class insertion) (7/7) ***'
717 $PDFLATEX $TEXFILE.tex
718 ⟨/buildproc⟩
```

5 More about conference proceedings making

5.1 Steps to generate the final version of your proceedings

We now describe the methodology and steps used to produce the final version of the provided example proceedings with the following constraints:

- paper templates have header and footer;
- the proceedings must have the same header/footer;
- we want a general bibliography;
- we want the PDF papers to be named after their first page number;

5.1.1 Generate the program and the paper switch

You may generate the conference program and its corresponding paper switch:

- by hand (read sec. 4.3 for an example);
- using the `procswitchandtoc.pl` Perl script described in sec. 4.4.3 to generate both the `exsessions.tex` and `expapersswitch.tex` files from your `exprogram.csv` program file;

5.1.2 Changing papers' first page number

If you paper template has page numbers included in the footer, you may want each individual paper to have the same first page number as the one it has in the proceedings' table of contents[11]. To do so, The way to do that is:

1. make at least two runs with the following options:

   ```
   \documentclass[a4paper,10pt,twoside,twosidepapers,%
     compil=last,headers=allpages,movepagenumbers,electronic]{confproc}
   ```

   to include all papers and build a table of contents with proper page numbers.

2. prepare each paper for insertion. There are two ways to do this:

   (a) lazy way: use the `\setcounter{page}{1}` line in the paper, and replace the `1` by the real number;

   (b) better way: centralize page numbers in the `expages.tex` file, organized by the paper ID. Then, the two steps are:

   - add the following in the preamble of each paper:
     `\input{../../expages.tex}\setpagenumber{04}`
     Here, the ID paper is `04`, and has to be updated for each paper.
   - update the `expages.tex` file for each paper: set its first page number as it appears in the table of contents.

   By doing so, you can update the program to re-build the table of contents as many times as yuo want, without having to re-edit all papers.

3. when the program (and the corresponding paper ordering) is defined, (re)generate each paper independently with proper first page number (using the `buildpapers` Unix script provided in sec. 4.6.1);

4. check that you did not make errors in numbering the first page. You may run LaTeX with at least the headers=allpages,movepagenumbers options. If there are still errors, re-do step 2–3 till the page numbers are ok.

5.1.3 Renaming papers

You may consider renaming all papers according to their first page number (*e.g.* `p_NNN.pdf` if you decide to only rename the PDF files). This is very helpful to ensure you CD version of the proceedings is ISO compliant, and has file names with less than 8 characters (+ extensions). This means that you only do this when you are sure of your page numbering. You then have to change file names accordingly in the `.csv` file, re-generate the `expapersswitch.tex` file, and rebuild the proceedings. It is easily done using the Unix scripts.

[11] When clicking on a paper, the PDF file of this paper will open with the same first page number. Also, if the conference papers are available on the web, knowing the page numbers will help readers to properly cite them.

5.1.4 General bibliography

As said previously, for DAFx-06 (but not for the provided example), we worked with three files in order to simplify the bibliography merging process:

- `exbibconcat.bib` containing all citations for all papers;
- `exbibcommon.bib` containing common bibliography items, added one by one during the merging process;
- `exbibstrings.bib` containing all common strings (conference names, journal names, etc), to ensure coherence among citations from same sources (journal, conference).

Here is how those files are created and used:

1. create the complete bibliography:
   (a) for each paper, change its bib item tags to a tag that cannot be common to 2 papers (we used a `paperID:originaltag` format)[12];
   (b) ensure that each paper has a proper list of bibliography items using those new tags;
   (c) concat the bibliographys of all individual paper into a single file named `exbibconcat.bib`;
   (d) set the proceedings bibliography file to

   ```
   \renewcommand{\procbibfile}{\BIBPATH exbibconcat.bib}
   ```

   (e) run LaTeX with the complete bibliography (using the compil=bibmerge option that uses `\nocite{*}`) so bib items are include twice: by the paper and globally. You are now ready to merge bibliographies.
2. merge the bibliographic items (long step):
   (a) first, add the `exbibcommon.bib` file to the list of bibliography files by setting the proceedings bibliography files to:

   ```
   \renewcommand{\procbibfile}{\BIBPATH exbibcommon.bib,%
     \BIBPATH exbibconcat.bib}
   ```

   (b) for each item appearing multiple times:
      i. create a corresponding entry in the `exbibcommon.bib` file;
      ii. remove each appearance of it in `exbibconcat.bib`;
      iii. this is the perfect time for correcting inconsistent references (title, list of authors, page numbers, etc)! Note that this process requires a lot of time, as it is the slowest in the bibliography merging process.
3. merge the bibliography strings:

[12] You may ask your authors to do so if you send them editor's notes.

(a) add the `exbibstrings.bib` file to the list of bibliography files by setting the proceedings bibliography files to:

```
\renewcommand{\procbibfile}{\BIBPATH exbibstrings.bib,%
  \BIBPATH exbibcommon.bib,\BIBPATH exbibconcat.bib}
```

(b) merge the common strings. For each string shared by several items:

i. define the corresponding string in the `exbibstring.bib` file. For instance, for the IEEE Transactions on Acoustics, Speech, and Signal Processing, add:

```
@string{IEEE-TASSP = "{IEEE Trans. Acoust., Speech,
  and Signal Proc.}"}
```

ii. use this definition (*e.g.* `IEEE-TASSP`) to replace any appearance of its in the `exbibconcat.bib` file. For instance, use:

```
@article{paper027:Mcaulay86,
  Author = {Robert J. McAulay and Thomas F. Quatieri},
  Title = {Speech Analysis/Synthesis Based on a%
      Sinusoidal Representation},
  Journal = IEEE-TASSP,
  Volume = {34},
  Number = {4},
  Pages = {744-754},
  Year = {1986}}
```

4. updating papers once the general bibliography is ok:

(a) for each paper:

i. generate a new bibliography file (*e.g.* `p_027.bib` for `p_027.tex`) that included only their own non-common bibliography items remaining in the `exbibconcat.bib` file;

ii. edit each paper so that it uses both this new bibliography file (`p_027.bib`) together with the `exbibcommon.bib` and the `exbibstrings.bib` files. This will provide common and coherent contents to both local and general bibliographies. Since the `p_027.tex` file is placed in the `papers/pdftex/p_027/` folder, its bibliography insertion will then become something like:

```
\bibliography{../../exbibstrings.bib,%
    ../../exbibcommon.bib,p_027.bib}
```

(b) re-run LaTeX on all papers, using the `buildpapers` Unix script (see sec. 4.6.1). This script also copies all resulting PDFs to the right place.

(c) if you did not use the previous script, copy all PDF papers to the `papers/` folder. The `buildcppdfpapers` Unix script (see sec. 4.6.2) can do it for you, for instance if you changed some of the papers but not all, and do not remember which were to be copied.

You are now done with bibliography merging, and are ready to re-run LaTeX on the proceedings using the compil=backref options as many times as necessary to provide proper back-references and page numbering.

5.2 Some considerations on bibliographies

5.2.1 Which bib styles for the templates?

Concerning the paper bibliography style, each conference has its own style, often derived from other ones. For instance, the DAFx-06 templates were using the `IEEEbib.bst` style. It however is quite old (1993), and not as compact as the latest `IEEEtran.bst`. As the DAFx proceedings use the order of appearance and not alphabetical sorting (as do the IEEE publications it was inspired from), the more recent `IEEEtranS.bst` style was not suited. The DAFx-06 templates were corrected so as to use `IEEEtran.bst` instead of `IEEEbib.bst` before insertion of papers into the proceedings.

5.2.2 Which bib styles for the general bibliography?

Concerning the general bibliography, the style may be a bit different, as it does not need any numbering. Moreover, we want alphabetical sorting this time, in order to simplify the search for any particular author cited. Therefore, we need to use another bibliographic style than the paper templates one!

The style to use has to look more like APA style, with the first author's last name coming first. For that reason, we used the `newapa` style, and derived the `newapave` style with minor cosmetic tweaking (those styles have no numbering, the author list is like "Lastname, F.", etc).

5.2.3 Right-flushing the biblio back-references

Usually, the back-references provided by the `hyperref` package are a list of numbers that follow the end of the bibliographic items (after the last dot). For instance in the example using the `newapa` bibliographic style, one would obtain:

> Arfib, D. (1998). Different ways to write digital audio effects programs. In *Proc. of the COST-G6 Workshop on Digital Audio Effects (DAFx-98)*, Barcelona, Spain, (pp. 188–91). 6, 11, 16, 22, 29

We modified the `newapa.bst` (resp. `newapa.sty`) file by making slight changes (but in many places), and renamed it `newapave.bst` (resp. `newapave.sty`) for the DAFx-06 proceedings. This modification process was carried out to provide some changes and adjustements in the bibliography style and layout (no parenthesis around page numbers nor around the year; and year is placed at the end), as well as right-flushed back-references. Using the `newapa` bibliographic style, the previous example is then modified in:

> Arfib, D. Different ways to write digital audio effects programs. In *Proc. of the COST-G6 Workshop on Digital Audio Effects (DAFx-98)*, Barcelona, Spain, pp. 188–91. 1998. 6, 11, 16, 22, 29

With the color links, it is visually easier to see the back-references when they are right-flushed that when they are left-flushed. If you wanted to apply the right-flushed back-references to another style, here is the only trick to keep from the hack. Edit the function that displays the last item of the bibliographic element list (`output.year.check` in our case, because it was reformatted) so as to add a `\hfill` at the end of that command (the year definition in our example):

```
FUNCTION {output.year.check}
{ year empty$
 { ``empty year in `` cite$ * warning$ }
 { write$
   `` (" year * extra.label * `)" *
     mid.sentence 'output.state :=
   }
 if$
}
```

Important note: if the last displayed item (in our case, the year) was not in last position, you also need to edit the following functions defined under the `FUNCTION {name}` format (not exhaustive list): `article`, `book`, `booklet`, `inbook`, `incollection`, `inproceedings`, `manual`, `masterthesis`, `misc`, `phdthesis`, `proceedings`, `techreport`, and `unpublished`. For instance:

```
FUNCTION {misc}
{ output.bibitem
  format.authors output
  author format.key output            % added
  output.year.check                   % added
  title howpublished new.block.checkb
  format.title output
  new.block
  howpublished output
  new.block
  note output
  fin.entry
```

was replaced with:

```
FUNCTION {misc}
{ output.bibitem
  format.authors output
  author format.key output
  title howpublished new.block.checkb
  format.title output
  new.block
  howpublished output
  new.block
  note output
  output.year.check % moved
  fin.entry
```

The Unix `diff` command may help you to compare the original (`newapa.bst`) and modified (`newapave.bst`) versions of the bibliography style files.

5.2.4 Ensuring that the biblio back-references are right-flushed

With this hack in the bibliography style, all bibliography back-references should appear as right-flushed. However, it sometimes does not work, due to some LaTeX formatting mechanisms I am not competent to identify. Then, sometimes, a list of numbers will see its last item appearing alone on next line, even though there obviously was enough space on the previous line where the other numbers appear. I noticed that some minor reformatting of the concerned bibliographic item could solve this issue. There is no way to automatically do this, nor general rule, only a few tricks I found efficient to solve this issue in 6 items of the DAFx-06 proceedings:

- moving from optional to compulsory a bib item field;
- replacing a `---` by a `--` (arg! so ugly...);
- adding a missing space (*e.g.* between the thesis number and the URL);
- using hyphenation at your advantage: you may sometimes get a reference for which the layout will not hyphen the end of the title, just before the last line (this is the reason I suspect to mess the whole process behind the `\hfill` command).

5.3 Quality and production

We present here some other ideas dealing with the production and the quality of the proceedings. Indeed, to provide the best possible quality proceedings, you may have to edit the individual papers (see sec. 5.3.1), which can be simplified by sending notes to authors before they submit the final version (see sec. 5.3.2). You may also want to use only LaTeX, which may require to convert all Word files to LaTeX when the proceedings templates are provided in the 2 formats to authors (see sec. 5.3.3). The last comments are about the graphical quality (sec. 5.3.4) and the necessary font embedding in the PDF images (see sec. 5.3.5).

5.3.1 Editing the papers

For each paper, we checked:

- proper use of US letter instead of A4 format;
- title has a `\break` at the right place;
- affiliation type chosen is the good one and has the minimal size;
- affiliation is properly layed out;
- author's email exists and works;

- captions are italic, with a "." at the end;
- all figures are referenced in the text;
- bibliographic items have a volume and number, as well as page number or preprint number (AES convention);
- bibliographic items are using generally defined strings, so as to be identical each time they are cited;
- math units: Physics convention is roman, not italic (*i.e.* not LaTeX's math style). Ex: 5 Hz, and not $5Hz$.

So as to ensure a uniform look, we changed for all papers:

- the URL font to sans-serif, as its default font is too wide. We added the following command in the preamble of each paper:
  `\usepackage{url}\urlstyle{sf}`
- all `\href{}{}` commands related to URL (*i.e.* all except emails) where converted to URL, as it is more apropriated (it does the hyphenations for you and most of the time it does it better).

Some not-so-minor comments:

- the only way to do a valid line breaks (with the `dafx06.sty` style) in the paper title was not with `\newline`, nor `\\`, but with the `\break` command (we also noticed that using `\linebreak` creates unbalanced titles). That way, it works similarly for both the title and the pdftitle in metadata.
- using the `balance.sty` package allows to well balance the last page, which is especially useful for the bibliography.

5.3.2 Improving the layout quality: Sending edition notes to authors

In order to improve the quality of the proceedings, we listed many common errors and gave a feedback to authors of all accepted papers. This is how we proceeded:

1. examine all papers and list the common errors and electronic paper info (PDF version, PDF generator, valid hyperref, etc) (10 h);
2. create the full list of problems, in an `.csv` file, with papers' title, index and author's email (1/2 h);
3. fill in, column by column, the data (30 h) with people's errors;
4. write a Perl script to convert info in this file into usual sentences and indications of what to do in order to improve the paper quality (4 h);
5. write an AppleScript converting this text file into a list of email texts, ready to be sent to authors (4 h).

Those scripts are not provided in the package, but could be on popular demand.

5.3.3 Manual Word to LaTeX conversion

If you really want to automatize all the processes in you proceedings making, you may want to get rid of non-LaTeX generated documents. If you really cannot ask the conference authors to use LaTeX, you will have to convert files by yourself. From our experience in DAFx-06, here are the steps to follow:

1. copy and paste the whole text;
2. update the header (author, title, affiliation);
3. add sections, subsections, etc. according to the original text;
4. insert figures and tables with the proceedings template style;
5. update captions with the proceedings template style;
6. update labels and references for figures and tables;
7. edit equations (inside the text and as separated formulae);
8. update labels and references for equations ;
9. update labels and references for sections, subsections, etc.;
10. replace all Word quotes by LaTeX quotes (double “”, and single ‘’ quotes) to avoid they disappear (Unicode-related issue);
11. correct any specific formatting such as italic, capitals, bold, etc;
12. remove useless hyphenations “-” produced as line breaks by Word;
13. replace remaining hyphens by the proper corresponding one: hyphen ‘-’, semi-quadratin ‘–’ and quadratin ‘—’.

5.3.4 How to ensure the graphical quality?

The best way to ensure excellent quality for you graphics in the electronic version of you proceedings consists in using vectorial images, *i.e.* postscript (`.ps` or `.eps`) or `.pdf` files. It should be the same for the printed version, except that the font problem with Matlab described in sec. 5.3.5 may imply to convert vectorial images to bitmap images (such as `.png` or `.gif`).

5.3.5 How to ensure your fonts are embedded in the PDF?

With Matlab, the system fonts such as Arial or Helvetica are not embedded at all in the `.pdf` nor in the `.eps` file. This can be checked by converting any of the two into another format using Ghostscript. For instance, converting a `.pdf` to `.ps` using `pdf2ps` will show the following log info:

```
**** Warning: Fonts with Subtype = /TrueType should be embedded.
              The following fonts were not embedded:
```

```
                    Arial-ItalicMT
                    ArialMT

**** This file had errors that were repaired or ignored.
**** The file was produced by:
**** >>>> pdfTeX-0.14h <<<<
**** Please notify the author of the software that produced this
**** file that it does not conform to Adobe's published PDF
**** specification.
```

You can check the same by processing a PDF files produced by Matlab using Acrobat Distiller ($), and you will get the same errors..

Therefore, when printing on a system that is not yours (and that may be the one you will use to print the proceedings), the printer may be set such as not to replace a missing font by a similar one. Then, Matlab text can be totally scrapped, replaced by other numbers, letters, and so on!

One first step of a solution was to use Acrobat Professional ($), with the PitStop plug-ins ($ again), and set is so as to create a report and solve problems concerning partially or not embedded fonts. Unfortunately, the problem is not exactly the font embedding, but the glyph table mapping that is wrong. Another solution consists in converting the PDF files into a bitmap format. It is quite dirty, since it pixellizes a vectorial image, but at least, it is able to print! For instance, we converted `.pdf` images with font problems into `.png` format, with a figure width of 8cm and a 600 dpi resolution (this seems too much resolution for printers, as 300 dpi may be enough), and it did the trick.

It now seems that you have all the necessary files and information with a functional and complete example in order to produce you own conference proceedings!

Have fun using `confproc`!!!

6 Implementation

Please note: The macros containing a '@' are internal commands. They do *not* belong to the user interface and should not be called directly by the end user! You may get unpredictable results if you don't know what you are doing. Internal macros may be changed by me without announcement or warning, so be careful. Use them at your own risk if you cannot resist...

6.1 Initialization

As you can see, this package is based on the book package for all its layout aspects.

```
719 ⟨*package⟩
720 \LoadClass{book}
```

6.2 Option declaration

6.2.1 Options of the book package

Right now, options about paper size and font sizes are used to set the document parameters. For paper size, only a4paper:

a4paper

```
721 \DeclareOption{a4paper}
722   {\setlength\paperheight {297mm}%
723   \setlength\paperwidth {210mm}%
724   \setlength\oddsidemargin {-4.95truemm}%
725   \setlength\evensidemargin {-10.95truemm}%
726   \def\shiftsafourpaper{}}
```

and letterpaper:

letterpaper

```
727 \DeclareOption{letterpaper}
728   {\setlength\paperheight {11in}%
729   \setlength\paperwidth {8.5in}%
730   \setlength\oddsidemargin {-4.95truemm}%
731   \setlength\evensidemargin {-4.95truemm}%
732   \def\shiftsletterpaper{}}
```

are defined. They are use to set the document and also passed to the book package.

```
733 \PassOptionsToPackage{a4paper,letterpaper}{book}
734 \PassOptionsToPackage{a4paper,letterpaper}{hyperref}
```

10pt,11pt,12pt

Only three font sizes are supported yet (namely 10pt, 11pt and 12pt), as it did not seem obvious to me how bigger/smaller font sizes could be useful for proceedings.

```
735 \DeclareOption{10pt}{\renewcommand\@ptsize{0}}
736 \DeclareOption{11pt}{\renewcommand\@ptsize{1}}
737 \DeclareOption{12pt}{\renewcommand\@ptsize{2}}
```

oneside
twoside

Both oneside and twoside options are re-defined, exactly as they were in the book package:

```
738 \DeclareOption{oneside}{\@twosidefalse \@mparswitchfalse%
739   \def\conf@WithClearsinglepage{}}
```

```
\DeclareOption{twoside}{\@twosidetrue \@mparswitchtrue%
  \def\conf@WithCleardoublepage{}}
```

onesidepapers
twosidepapers

Right now, they are not passed to the book package. We define both onesidepapers and twosidepapers options, to allow or not for a double page clear after each paper (so that they all start on a right and odd page, as for chaters in a book):

```
\DeclareOption{onesidepapers}{%
  \def\conf@WithClearsinglepagePapers{}}
\DeclareOption{twosidepapers}{%
  \def\conf@WithCleardoublepagePapers{}}
```

6.2.2 Options passed to the `hyperref` package

In its very first version, the `confproc` package was passing the following `hyperrref`-specific options to it: colorlinks, colorlinks and colorlinks=true, colorlinks=false, linkcolor, citecolor, urlcolor, pagecolor, bookmarksopen, bookmarksopen=true, bookmarksopen=false. Not knowing how to use the `keyval` package, I used a simple and dirty trick, re-defining and passing these options, but it was limitating the customization of `hyperref` to what I believed was useful. So, to remove this biais, I treat them as any unknown options, that are passed to the `hyperref` package. If you decide to use other options of `hyperref`, you may unfortunately break some of the mechanisms for the proceedings making.

6.2.3 Options specific to the `confproc` package

Compilation step:

changes the page numbering and the speed of the LaTeX run. For working on the bibliography merging process with compil=bibmerge:

compil=bibmerge

```
\DeclareOption{compil=bibmerge}
  {\typeout{confproc: LaTeX run-> bib. items only (merging process)}%
  \def\conf@BibMerge{}}
```

compil=bibbackref

The compil=bibbackref option is to be used to create proper index and table of contents page numbering, as well as back-references:

```
\DeclareOption{compil=bibbackref}
  {\typeout{confproc: LaTeX run-> generating biblio back references}%
  \def\conf@BibBackRef{}}
```

compil=last

The compilation option compil=last option is to be used at last (when all proper page numbers and back references have been generated):

```
\DeclareOption{compil=last}
  {\typeout{!!! confproc: LaTeX run-> LAST !!!}%
  \def\conf@FinalVersion{}}
```

Draft/final

draft

The draft option is passed to the `pdfpages` package to speed up LaTeX runs:

```
\DeclareOption{draft}
```

```
  {\typeout{confproc: not including PDF files}%
  \PassOptionsToPackage{draft}{pdfpages}%
  \def\conf@DoNotIncludePDFs{}}
```

`final` as well as the final option (no speed up of LaTeX runs):

```
\DeclareOption{final}
  {\typeout{confproc: including PDF files}%
  \PassOptionsToPackage{final}{pdfpages}%
  \def\conf@IncludePDFs{}}
```

Electronic/printed

`electronic` For an electronic document (color hyperlinks), we define the electronic option:

```
\DeclareOption{electronic}%
  {\typeout{confproc: adding colors for hyperlinks}%
  \PassOptionsToPackage{colorlinks=true}{hyperref}%
  \def\conf@procWithColors{}}
```

`printed` For a printed document (black hyperlinks), we define the printed option:

```
\DeclareOption{printed}%
  {\typeout{confproc: hyperref with no color for hyperlinks}
  \PassOptionsToPackage{colorlinks=false}{hyperref}%
  \def\conf@procWithoutColors{}}
```

Headers

We define four options for adding headers on some specific pages only:

`headers=no` on no page with the headers=no option (default):

```
\DeclareOption{headers=no}%
  {\typeout{confproc: no fancy headers}%
  \def\conf@NoFancyHeaders{}}
```

`headers=pdfonly` on inserted PDFs only with the headers=pdfonly option:

```
\DeclareOption{headers=pdfonly}%
  {\typeout{confproc: fancy headers on inserted PDFs only}%
  \def\conf@FancyHeadersOnPapers{}}
```

`headers=exceptpdf` on all pages except the inserted PDFs, with the headers=exceptpdf option:

```
\DeclareOption{headers=exceptpdf}%
  {\typeout{confproc: fancy headers for all pages except PDFs}%
  \def\conf@FancyHeadersExceptPapers{}}
```

`headers=allpages` and on all pages with the headers=allpages option:

```
\DeclareOption{headers=allpages}%
  {\typeout{confproc: fancy headers on all pages, PDFs included}%
  \def\conf@FancyHeadersOnPapers{}%
  \def\conf@FancyHeadersExceptPapers{}}
```

Two/three columns index of authors

`twocolindex` The twocolindex option provides a 2 columns index of authors:

```
\DeclareOption{twocolindex}
  {\typeout{confproc: 2 columns index}%
  \def\conf@TwoColumnIndex{}}
```

`threecolindex` whereas the threecolindex provides a 3 column index of authors (default):

```
\DeclareOption{threecolindex}
  {\typeout{confproc: 3 columns index}%
  \def\conf@ThreeColumnIndex{}}
```

One/two columns general bibliography

`twocolbib` The twocolbib option provides a 2 columns bibliography (default):

```
\DeclareOption{twocolbib}
  {\typeout{confproc: 2 columns biblio}%
  \def\conf@TwoColumnBib{}}
```

`onecolbib` whereas the onecolbib option provides a 1 column bibliography:

```
\DeclareOption{onecolbib}
  {\typeout{confproc: 1 column biblio}%
  \def\conf@OneColumnBib{}}
```

One/two columns table of contents

`twocoltoc` The twocoltoc option provides a 2 columns table of contents:

```
\DeclareOption{twocoltoc}
  {\typeout{confproc: 2 columns TOC}%
  \def\conf@TwoColumnTOC{}}
```

`onecoltoc` whereas the onecoltoc option provides a usual 1 column table of contents (default):

```
\DeclareOption{onecoltoc}
  {\typeout{confproc: 1 column TOC}%
  \def\conf@OneColumnTOC{}}
```

Numbering the table of contents

`tocnumleft` the table of contents can be numbered on the left using the tocnumleft option:

```
\DeclareOption{tocnumleft}
  {\typeout{confproc: TOC numbering on left}%
  \def\conf@TocNumberingLeft{}}
```

`tocnumright` or on the right using the tocnumright option:

```
\DeclareOption{tocnumright}
  {\typeout{Confproc: TOC numbering on right}%
  \def\conf@TocNumberingRight{}}
```

Moving footer with page number

movepagenumbers

Move the footer (to check page numbers) with the movepagenumbers option:

```
\DeclareOption{movepagenumbers}
  {\typeout{confproc: moving page numbers to check PDFs numbering}%
  \def \conf@TestPageNumbering{}}
```

Clearpage

clearsinglepage
cleardoublepage

clear single or double page, depending if the document is oneside or twoside, with the clearsinglepage and cleardoublepage options:

```
\DeclareOption{cleardoublepage}%
  {\typeout{confproc: using double page clearing}%
  \def\conf@WithCleardoublepage{}}
\DeclareOption{clearsinglepage}%
  {\typeout{confproc: using double page clearing}%
  \def\conf@WithClearsinglepage{}}
```

debug,verbose

Define debug and verbose options to print debug (`confproc` and `hyperref`):

```
\DeclareOption{debug}
  {\typeout{Confproc: printing debug for confproc, hyperref}%
  \PassOptionsToPackage{debug}{hyperref}%
  \def\conf@procWithDebug{}}
\DeclareOption{verbose}
  {\typeout{Confproc: printing debug for confproc, hyperref}%
  \PassOptionsToPackage{debug}{hyperref}%
  \def\conf@procWithDebug{}}
```

We are now done withe the options declarations.

6.3 Options processing

6.3.1 Unknown options

Give a warning for unknown options, and pass them by default to `hyperref`:

```
\DeclareOption*{\PackageWarning{procconf}%
  {Unknown option `\CurrentOption'; passed to 'hyperref'}%
  \PassOptionsToClass{\CurrentOption}{hyperref}}
```

6.3.2 Default values for options

Options that are not set by the user have the following default settings:

```
\ExecuteOptions{letterpaper,10pt,twoside,%
  twosidepapers,electronic,headers=no,compil=bibbackref,%
  tocnumleft,onecoltoc,threecolindex,twocolbib,%
  colorlinks=true,linkcolor=red,citecolor=blue,pagecolor=red,urlcolor=blue,%
  bookmarksopen=true,bookmarksopenlevel=1}
```

6.3.3 Options processing

Options can now be processed:

```
\ProcessOptions
```

6.4 Required packages

Several packages are included, among which many are required.
The `graphicx` package is for users to insert logos (first page, welcome letters):

```
\RequirePackage{graphicx}
```

Use the `pdfpages` package (core of this class) to insert the paers as PDF documents, page-by-page, as images:

```
\RequirePackage{pdfpages}
```

Use the `fancyhdr` package to customize the headers and footers so that they match those of the the paper templates:

```
\RequirePackage{fancyhdr}
```

Use the `tocbibind` package to change the `\indexname` command; its options are to disable automatic insertion in the table of contents (hand made insertion instead):

```
\RequirePackage[nottoc,notbib,notindex]{tocbibind}
```

Use the `titletoc` package (part of the `titelsec` package) to change the table of contents layout (order of text, numbers, fonts, etc.):

```
\RequirePackage{titletoc}
```

Use `multitoc` with the `toc` option for a two columns table of contents:

```
\ifdefined\conf@TwoColumnTOC
  \RequirePackage[toc]{multitoc}
\fi
```

Use the `index` package to enable the creation of the index of authors:

```
\RequirePackage{index}
```

Use the `multitoc` package for a multi-columns table of contents or index:

```
\RequirePackage{multicol}
```

Also, when asking for a 2 or 3 columns index, redefine the `\theindex` environment (modified form the `gatech-thesis-index.sty` package) as:

```
\ifdefined\conf@TwoColumnIndex
  \renewenvironment{theindex}{%
    \if@twocolumn \@restonecolfalse
    \else \@restonecoltrue \fi
    \vspace*{-0.8cm}
    \section*{{\indexname}}
    \let\item\@idxitem
    \columnseprule \z@
    \columnsep 35\p@
    \begin{multicols}{2}[%
      \ifx\index@prologue\@empty\else
        \index@prologue
```

```
        \bigskip
      \fi]%
      \parindent\z@
      \parskip\z@ \@plus .3\p@\relax
  }{\end{multicols}%
    \if@restonecol \onecolumn
    \else \clearpage \fi}
\else
    \ifdefined\conf@ThreeColumnIndex%
  \renewenvironment{theindex}{%
    \if@twocolumn \@restonecolfalse
    \else \@restonecoltrue \fi
    \vspace*{-0.8cm}
    \section*{{\indexname}}
    \let\item\@idxitem
    \columnseprule \z@
    \columnsep 35\p@
    \begin{multicols}{3}[%
      \ifx\index@prologue\@empty\else
        \index@prologue
        \bigskip
      \fi]%
      \parindent\z@
      \parskip\z@ \@plus .3\p@\relax
  }{\end{multicols}%
    \if@restonecol \onecolumn
    \else \clearpage \fi }
  \fi
\fi
```

Use the `sectsy` package to change the sections font in the table of contents:

```
\RequirePackage{sectsty}
```

Use the `newapave` style for the general bibliography:

```
\newcommand{\confcite}[1]{\cite{#1}}
\RequirePackage{newapave}
```

If you do not wish to use the one developed for DAFx-06 but prefer to use the original `newapa` style, replace this last line in `confproc.cls` by:

```
\RequirePackage{newapa}
```

Links in the PDF files require to use the `color` package:

```
\RequirePackage{color}
```

We predefine here the names and values for the color links, so that they can be used:

```
\definecolor{colorforlink}{rgb}{0,0,0.5}
\definecolor{colorforpage}{rgb}{0,0,0.5}
\definecolor{colorforcite}{rgb}{0,0.5,0}
\definecolor{colorforurl}{cmyk}{0,1,0,0}
```

together with the hyperref package with the following default options:

```
\RequirePackage[pdftex,raiselinks,hyperindex,backref,pagebackref,%
    plainpages=false,pdfpagelabels,breaklinks,linktocpage,%
    pdfstartview=XYZ]{hyperref}
```

and with the hypcap package, for including floats (figures or tables):

```
\RequirePackage[figure,table]{hypcap}
```

6.5 Proceedings specific commands

We now define the default values of some proceedings-specific commands.

6.5.1 PDF metadata

\procpdfauthor Define commands to set the PDF metadata: \procpdfauthor for the author:

```
\newcommand{\procpdfauthor}{Proceedings author/editor}
```

\procpdftitle \procpdftitle for the title:

```
\newcommand{\procpdftitle}{Proceedings title}
```

\procpdfsubject and \procpdfsubject for the subject:

```
\newcommand{\procpdfsubject}{Proceedings description}
```

\hypersetup These commands are used in the \hypersetup command:

```
\hypersetup{
  pdfauthor = \procpdfauthor,
  pdftitle = \procpdftitle,
  pdfsubject = \procpdfsubject,
  pdfkeywords = {},
  pdfcreator = {LaTeX with ‘confproc’ package},
  pdfproducer = {pdfLaTeX}}
```

6.5.2 Page layout

The proceedings default page layout is:

```
\topmargin 0truept
\headheight 12truept
\footskip 0truept
\textheight 229truemm
\textwidth 175truemm
\voffset -28truept
\headsep 20truept
```

Those values may be changed in the preamble, depending on your paper template.

6.5.3 Special section names

We redefine the names of the table of contents (as it should appear in itself):

```
\renewcommand{\contentsname}{Conference Program}
```

of the general bibliography and index of authors (as they appear in the document and in the table of contents):

```
\renewcommand{\bibname}{Full Bibliography}
\renewcommand{\indexname}{Index of Authors}
```

6.5.4 Header and footer

We first define the default header:

```
\newcommand{\proclhead}{\em{\small{Proceedings of the blah blah blah}}}
```

and the default footer:

```
\newcommand{\proccfoot}{{\vskip 11mm}{\small Proc-\thepage}}
```

We now define the default page styles for use with headers:

```
\pagestyle{fancyplain}
```

together with the corresponding settings:

```
\renewcommand{\headrulewidth}{0pt}
\renewcommand{\footrulewidth}{-5mm}
\lhead{\proclhead}
\rhead{}
\lfoot{}
\rfoot{}
\cfoot{\proccfoot}{}
```

Depending on the value of the headers option, we change the default page style:

```
\ifdefined \conf@FancyHeadersExceptPapers
  \pagestyle{fancy}
\else
  \pagestyle{empty}
\fi
```

We set the optional vertical shift for the footer (for checking page numbers):

```
\newlength{\procoptfootskip}
\ifdefined\conf@TestPageNumbering%
  \setlength{\procoptfootskip}{3mm}%
  \cfoot{\vskip \procoptfootskip \proccfoot}%
\else%
  \setlength{\procoptfootskip}{0mm}%
\fi
```

6.5.5 Table of contents layouts

Using the `titletoc` commands, we define the default table of contents layout.

Default

For right numbering:

```
\ifdefined\conf@TocNumberingRight
```

we first set the left margin of papers inserted as sections:

```
  \titlecontents{section}[2.5em]% left margin
```

we then set the table of contents spacing between 2 papers:

```
    {\vspace*{0.3em}}% space between two papers in the TOC
```

and the filler and page number:

```
    {}{}{\contentsmargin{0pt} \hfill \contentspage}% filler and page
```

For left numbering:

```
\else%
  \dottedcontents{section}[]{\fillright}{}{1pc}
  \titlecontents{section}[2.5em]%
    {\vspace*{0.3em}}%
```

we set the left shift of page numbers:

```
    {\hspace*{-2.5em}\contentspage\hspace*{2.5em}}% left shifting page num.
    {\hspace*{-2.5em}\contentspage\hspace*{2.5em}}% idem
    {}% filler and page
\fi
```

At document frontmatter

```
\newcommand{\tocmattertocstyle}{
```

Parts are used for the preamble:

```
\titlecontents{part}[-1em]{\addvspace{1pc}}%
  {\contentspage\hspace*{3.2em}\contentsmargin{0pt}%
    \makebox[0pt][r]{\huge\thecontentslabel\enspace}\large}%
  {\contentspage\hspace*{3.2em}\contentsmargin{0pt}\large}%
  {}[\addvspace{.5pc}]}
```

and chapters for each page for the preamble:

```
\titlecontents{chapter}[-1em]{\addvspace{1pc}}%
  {\contentspage\hspace*{3.2em}\contentsmargin{0pt}%
    \makebox[0pt][r]{\huge\thecontentslabel\enspace}\large}%
  {\contentspage\hspace*{3.2em}\contentsmargin{0pt}\large}%
  {}[\addvspace{.5pc}]
```

At document mainmatter

Parts are used for days, or for sessions of no days are used; chapters are used for sessions (if days are used); sections are always used for papers.

```
\ifdefined\conf@TocNumberingRight
  \newcommand{\mainmattertocstyle}{
    \titlecontents{chapter}[0pt]%
      {\addvspace{1pc}\bfseries\itshape}%
      {\contentsmargin{0pt}\bfseries%
        \makebox[0pt][r]{\huge\thecontentslabel\enspace}\large}%
      {\contentsmargin{0pt}\large}{}[\addvspace{.5pc}]%
    \titlecontents{part}[0pt]%
      {\addvspace{1pc}\bfseries}%
      {\contentsmargin{0pt}\bfseries%
```

```
        \makebox[0pt][r]{\huge\thecontentslabel\enspace}\large}%
      {\contentsmargin{0pt}\large}{}[\addvspace{.5pc}]%
\else
  \ifdefined\conf@TocNumberingLeft% default
    \newcommand{\mainmattertocstyle}{
      \titlecontents{section}[2.5em]%
        {\vspace*{0.3em}}%
        {\hspace*{-2.5em}\contentspage\hspace*{2.5em}}%
        {\hspace*{-2.5em}\contentspage\hspace*{2.5em}}%
        {}%
      \titlecontents{chapter}[0pt]%
        {\addvspace{1pc}\bfseries \itshape}%
        {\contentsmargin{0pt}\bfseries %
          \makebox[0pt][r]{\huge\thecontentslabel\enspace}\large}%
        {\contentsmargin{0pt}\large}{}[\addvspace{.5pc}]%
      \titlecontents{part}[0pt]%
        {\addvspace{1pc}\bfseries}%
        {\contentsmargin{0pt}\bfseries %
          \makebox[0pt][r]{\huge\thecontentslabel\enspace}\large}%
        {\contentsmargin{0pt}\large}{}[\addvspace{.5pc}]%
   }
  \else
    \newcommand\mainmattertocstyle{}
  \fi
\fi
```

\mainmatter Hence, we redefine the \mainmatter command to use this style:

```
\renewcommand\mainmatter{%
    \cleardoublepage
  \@mainmattertrue
  \pagenumbering{arabic}
  \mainmattertocstyle}
```

At document backmatter

Sections are used to format/display the general bibliography and index of authors, but they appear as parts in the table of contents:

```
\ifdefined\conf@TocNumberingRight
  \newcommand{\backmattertocstyle}{
    \titlecontents{section}[]{}{}{}{}[]%
    \titlecontents{part}%
      [0pt]{\addvspace{1pc}}{}{}%
      {\contentsmargin{0pt} \large \hfill\contentspage}%
      [\addvspace{.5pc}]%
  }%
\else%
  \ifdefined\conf@TocNumberingLeft%
    \newcommand{\backmattertocstyle}{%
      \titlecontents{section}[]{}{}{}{}[]%
      \titlecontents{part}%
```

```
        [0pt]%
        {\addvspace{1pc}}%
        {\contentspage\hspace*{2.5em}\contentsmargin{0pt}%
        \bfseries%
        \makebox[0pt][r]{\huge\thecontentslabel\enspace}%
        \large\bfseries}%
        {\contentspage\hspace*{2.5em}\contentsmargin{0pt} \large\bfseries}%
        {}%
        [\addvspace{.5pc}]%
      }%
  \else%
    \newcommand\backmattertocstyle{}%
  \fi%
\fi
```

`\backmatter` We then redefine the `\backmatter` command to use this style:

```
\renewcommand\backmatter{%
  \if@openright
    \cleardoublepage
  \else
    \clearpage
  \fi
  \@mainmatterfalse
  \backmattertocstyle}
```

6.5.6 Headers/footers

The default page style (and corresponding headers and footers) is set for non PDF-inserted pages:

```
\ifdefined\conf@FancyHeadersExceptPapers
  \newcommand{\otherpagestyle}{\pagestyle{fancy}}
  \newcommand{\thisotherpagestyle}{\thispagestyle{fancy}}
\else
  \newcommand{\otherpagestyle}{\pagestyle{empty}}
  \newcommand{\thisotherpagestyle}{\thispagestyle{empty}}
\fi
```

and for PDF-inserted pages:

```
\ifdefined\conf@FancyHeadersOnPapers
  \newcommand{\PDFpagestyle}{\thispagestyle{fancy}}
\else
  \newcommand{\PDFpagestyle}{\thispagestyle{empty}}
\fi
```

Using the `sectsty` package, all chapters have the same font in the table of contents:

```
\chapterfont{\thisotherpagestyle}
```

`\clearsingleordoublepage` We then define what the `\clearsingleordoublepage` stands for, depending if the document is single-sided or double-sided:

```
\ifdefined\conf@WithCleardoublepage
  \newcommand{\clearsingleordoublepage}{\cleardoublepage}
```

```
\else
  \ifdefined\conf@WithClearsinglepage
    \newcommand{\clearsingleordoublepage}{\clearpage}
  \else
    \newcommand{\clearsingleordoublepage}{\cleardoublepage}
  \fi
\fi
```

6.5.7 Creating back-references

We declare the commands related to bibliography insertion, depending on the compilation option, using the back-references previously generated:

```
\ifdefined\conf@FinalVersion
    \newcommand{\UseBackRef}{}
```

and generating the back-references to be used in the last compilation:

```
\else
    \newcommand{\CreateBackRef}{}
\fi
```

6.5.8 X and Y shifts

\LaTeXxShift
\LaTeXyShift
\WordxShift
\WordyShift

We now define the X and Y shifts for LaTeX (`\LaTeXxShift` and `\LaTeXyShift`) and Word (`\WordxShift`, `\WordyShift`) generated papers as lengths:

```
\newlength{\LaTeXxShift}
\newlength{\LaTeXyShift}
\newlength{\WordxShift}
\newlength{\WordyShift}
```

Their default values are set to those used for the example, depending on the document formant (A4/letter):

```
\ifdefined\shiftsafourpaper
  \setlength{\LaTeXxShift}{0pt}
  \setlength{\LaTeXyShift}{28pt}
  \setlength{\WordxShift}{10pt}
  \setlength{\WordyShift}{-40pt}
\else
  \ifdefined\shiftsletterpaper
    \setlength{\LaTeXxShift}{8.45pt}
    \setlength{\LaTeXyShift}{-3pt}
    \setlength{\WordxShift}{10pt}
    \setlength{\WordyShift}{-40pt}
  \fi
\fi
```

6.5.9 Paper insertion commands

We now pre-define (as empty) the commands used to insert the PDF papers (for including the first paper in the example), *i.e.* the paper title:

\papertitle

```
\newcommand{\papertitle}{}
```

\paperauthors the paper authors:

```
\newcommand{\paperauthors}{}
```

\paperindex the commands for insertion in the index:

```
\newcommand{\paperindex}{}
```

\paperref the paper reference, *i.e.* a tag (*e.g.* the file name, or the submission number):

```
\newcommand{\paperref}{}
```

\paperpagenum the number of pages:

```
\newcommand{\paperpagenum}{}
```

\papercite the bibliographic references (for the general bibliography):

```
\newcommand{\papercite}{}
```

\papertitlestyle the style for the title:

```
\newcommand{\papertitlestyle}{}
```

\paperauthorstyle and finally the style both the list of authors and the text between the title and the list of authors:

```
\newcommand{\paperauthorstyle}{\texorpdfstring{\newline\it}{\break}}
```

paperpagenum A new counter paperpagenum is added, for the number of pages of a paper:

```
\newcounter{paperpagenum}
```

\proctoctitleauthor The \proctoctitleauthor command defines the style for title/author entry in the table of contents using the style \papertitlestyle for the paper with title \papertitle and the style \paperauthorstyle for the paper with authors \paperauthors :

```
\newcommand{\proctoctitleauthor}[2]{%
    \texorpdfstring{{\papertitlestyle#1}{\paperauthorstyle#2}}%
      {{\papertitlestyle#1}}}
```

We chose to insert both the paper title and the list of authors in the table of contents, whereas only the title is inserted as a section in the bookmark. Then, the authors will be inserted, for each of them, as a subsection in the \procinsertpaper command.

\procinsertpaper We now come to the paper insertion \procinsertpaper command, one of the most important command of the whole class.

```
\newcommand{\procinsertpaper}[9]{
```

It has the following 9 arguments: i) X and Y shifts (with a space in between), ii) number of pages, iii) a reference, iv) the title, v) the list of authors, vi) the index entries, vii) the citations for the general bibliography, viii) the PDF file name and ix the bookmark entries for the authors. The insertion is made in two steps. First, the number of pages is set, and the index entries are given (for proper links from the index of authors to the paper's first page):

```
  \setcounter{paperpagenum}{#2}
  #6%
```

and the first page of the paper is inserted with proper offsets, filename, reference, title, list of authors:

```
\includepdf[noautoscale,offset= #1,pages=1,%
  linktodoc,linkname=\PAPERPATH #8.pdf,%
  addtotoc={1, section, 1, \proctoctitleauthor{#4}{#5}, #3},%
  pagecommand = {#9\PDFpagestyle}%
  ]{\PAPERPATH #8.pdf}%
```

Note where the bookmark entries are placed (argument #9): it was the only place I found where the bookmark link would be valid[13].

The second step consists in inserting the reminding pages. In the case of bibliography merging, we do not care yet about proper page numbering, but we want to see each paper's first and last page:

```
\ifdefined\conf@BibMerge%
  \includepdf[noautoscale,offset= #1,pages=\thepaperpagenum,%
    linktodoc,linkname=\PAPERPATH #8.pdf,%
  ]{\PAPERPATH #8.pdf}%
  \PDFpagestyle{}%
  \confcite{#7}%
  \ifdefined\conf@procWithDebug
    \typeout{confproc: bibliography insertion only}
  \fi
\else
```

If running LaTeX to create proper back-references, we insert all remaining pages except the last one (decrementing the page number), that is replaced by references to the paper's bibliographic items:

```
  \ifdefined\CreateBackRef
    \addtocounter{paperpagenum}{-1}
    \includepdf[noautoscale,offset= #1,pages=2-\thepaperpagenum,%
      linktodoc,linkname=\PAPERPATH #8.pdf,%
      pagecommand = {\PDFpagestyle}%
      ]{\PAPERPATH #8.pdf}%
    \PDFpagestyle{}%
    \confcite{#7}%
    \ifdefined\conf@procWithDebug
      \typeout{confproc: partial paper insertion (last page=bib items)}
    \fi
```

Otherwise, for the last run (assuming that proper back-references were created), all remaining pages are inserted:

```
  \else
    \ifdefined\UseBackRef
      \includepdf[noautoscale,offset= #1,pages=2-,%
        linktodoc,linkname=\PAPERPATH #8.pdf,%
        pagecommand = {\PDFpagestyle}%
        ]{\PAPERPATH #8.pdf}%
```

[13] if you check in the electronic version of the DAFx-06 proceedings, you will see what happens with unproper links... You will be directed to the second page of the paper!

```
      \fi
      \ifdefined\conf@procWithDebug
        \typeout{confproc: full paper insertion (last LaTeX run)}
      \fi
    \fi
  \fi
  \ifdefined\conf@procWithDebug
    \typeout{---> file: #8.pdf (#2 pages)}
    \typeout{---> title: #4}
    \typeout{---> author(s): #5}
    \typeout{---> index: #6}
  \fi
```

In any case, we go to next page, so that bookmarks go to the right spot:

```
  \newpage
```

Then, depending if we want all papers to start on the right page or not, we do a `\leardoublepage`:

```
  \ifdefined\conf@WithClearsinglepagePapers
    \clearpage
  \else
    \ifdefined\conf@WithCleardoublepagePapers
      \cleardoublepage
    \fi
  \fi
}
```

6.5.10 Table of contents insertion

`\tableofcontents`

We redefine the usual `\tableofcontents` command that inserts the table of contents, adds it to the PDF bookmark, and switches to the corresponding section style for insertion in the table of contents:

```
\renewcommand\tableofcontents{%
  \tocmattertocstyle
  \clearsingleordoublepage
  \pdfbookmark[0]{\contentsname}{contents}
    \if@twocolumn
      \@restonecoltrue\onecolumn
    \else
      \@restonecolfalse
    \fi
    \section*{\contentsname
        \@mkboth{%
           \MakeUppercase\contentsname}{\MakeUppercase\contentsname}}%
    \@starttoc{toc}%
    \if@restonecol\twocolumn\fi
  \clearsingleordoublepage
}
```

6.5.11 Organize the program by days or sessions

\procday The \procday command inserts the day given as argument in the table of contents:

```
\newcommand{\procday}[1]{%
  \phantomsection%
  \addcontentsline{toc}{part}{#1}}
```

\session The \session command inserts the session name given as argument in the table of contents:

```
\newcommand{\session}[1]{%
  \phantomsection%
  \addcontentsline{toc}{chapter}{#1}}
```

6.5.12 Paper switch

\paperswitch The \paperswitch command will be redefined in the expapersswitch.tex file, containing information about all papers. It is therefore declared empty:

```
\newcommand{\paperswitch}{}
```

6.5.13 Modifying the bibliography style

We first set the \bibhang length:

```
\setlength{\bibhang}{0.5em} %
```

We then redefine the \thebibliography environment, for proper use and insertion of the new section title in the table of contents. We also slightly reduce the space between bibliography item blocks (cosmetics change):

```
\renewenvironment{thebibliography}[1]
     {\ifdefined\conf@TwoColumnBib%
        \twocolumn
      \fi
      \ifdefined\conf@BibMerge%
        \nocite{*}%
      \else%
        \clearsingleordoublepage%
      \fi%
      \section*{\bibname}%
      \addcontentsline{toc}{part}{\bibname}
      \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}%
      \procbibintro
      \list{\@biblabel{\@arabic\c@enumiv}}%
           {\settowidth\labelwidth{\@biblabel{#1}}%
            \leftmargin\labelwidth
            \advance\leftmargin\labelsep
            \@openbib@code
            \usecounter{enumiv}%
            \let\p@enumiv\@empty
            \renewcommand\theenumiv{\@arabic\c@enumiv}}%
```

```
      \sloppy
      \clubpenalty4000
      \@clubpenalty \clubpenalty
      \widowpenalty4000%
      \sfcode‘\.\@m}
    {\def\@noitemerr
      {\@latex@warning{Empty ‘thebibliography’ environment}}%
      \endlist
      \setlength{\labelsep}{0em}
      \setlength{\itemindent}{-\bibhang}
      \setlength{\leftmargin}{\bibhang}}
```

We finally redefine the `\newblock` command, to diminish the space between bibliographic items:

```
\renewcommand\newblock{\hskip 0em plus 0.0em minus .07em}
```

6.5.14 General bibliography introduction

`\procbibintro` The `\procbibintro` cmd defines the introduction text the general bibliography:

```
\newcommand{\procbibintro}{{\it ~~~This bibliography is a compilation
  of all bibliographic  references from each paper. Page numbers that
  appear at the  end of each entry link to the bibliography sections that
  include it. Please click on the URL or on the page number to access
  the linked item.}}
```

6.5.15 Index insertion

`\insertindex` The `\insertindex` cmd defines the index insertion:

```
\newcommand{\insertindex}{
```

We first clear the page, so that two-sided documents start on a right (odd) page:

```
  \clearsingleordoublepage
```

We then back to the 1-column format, in case one adds text before the index:

```
  \onecolumn
```

We then include a phantom section and a link to bookmark (do not remove, as this dirty hack provides a valid pointer to the index):

```
%  \section*{\addcontentsline{toc}{part}{\bibname} \bibname}%
  \section*{~~}%
  \addcontentsline{toc}{part}{\indexname}%
```

The index of authors has no header/footer, as it is the last page and may be printed inside the cover (as for the printed version of the DAFx-06 proceedings):

```
  \renewcommand{\proclhead}{}%
  \renewcommand{\proccfoot}{}%
```

We then print the index:

```
  \printindex}
```

and we are done for the index of authors, as well as for the whole `confproc` class!

6.6 Load Configuration

Input a local configuration file (`confproc.cfg`), if it exists.

```
\InputIfFileExists{confproc.cfg}
  {\typeout{************^^J%
    * Local config file confproc.cfg used *^^J%
    ************}
  }{}%
```

⟨/package⟩

References

[1] Scott Pakin How to Package Your LaTeX Package CTAN: www.ctan.org/tex-archive/info/dtxtut/, November 2004. 3

[2] The LaTeX3 Project. LaTeX2e for class and package writers. CTAN: macros/latex/base/cls.dtx, March 1999. 3

[3] Frank Mittelbach, Denys Duchier, Johannes Braams, Marcin Woliński, and Mark Wooding. The DocStrip program. CTAN: macros/latex/base/docstrip.dtx, March 1999. 3

[4] The LaTeX3 Project. The LaTeX Project Public License. URL: www.latex-project.org/lppl.txt, September 1999. 59

[5] Eoin Brazil. Creating Conference Proceedings: Tips And Tricks From The Trenches. UL-IDC-02-03. URL: richie.idc.ul.ie/eoin/research/UL-IDC-02-03.pdf, Interactive Design Centre, University of Limerick, 2002. 3

[6] SLAC eConf: Full-Text Proceeding Instructions and Templates URL: www.slac.stanford.edu/econf/editors/fulltext-template/instructions.html, Retrieved on Sept. 2007 4

[7] American Mathematical Society Guide to AMS Editor's package URL: www.ams.org/authors/editpkg.html, Retrieved on Sept. 2007 4

[8] Adobe systems Inc. Acrobat Professional URL: www.adobe.com/products/acrobatpro/, Retrieved on Sept. 2007. 3

[9] Peter Wilson. The `combine` class and the `combinet`, `combnat` and `combcite` packages CTAN: macros/latex/contrib/combine/, March 2004. 3

[10] Sebastian Rahtz and Heiko Oberdiek. The `hyperref` package. CTAN: macros/latex/contrib/hyperref/, September 2006. 3, 18

[11] Andreas Matthias. The `pdfpages` package. CTAN: macros/latex/contrib/pdfpages/, 2004. 3, 4

[12] Vincent Verfaille. How to make your own proceedings for another conference? URL: http://www.dafx.ca/dafx06_proceedings_diy.html, October 2006. 2

[13] Vincent Verfaille. Report on the edition of the DAFx-06 proceedings. URL: http://www.dafx.ca/proceedings/report.pdf, March 2007. 2

Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

R

S

T

U

W

Change History

0.1c

0.1d