

# JPSP

## JACoW Proceedings Scripts Package for SPMS and InDiCo conferences



### Version for Windows OS

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Documentation version V 9.0

Changes			
Date	Version	Name	Comment
October 05	1.0	Jeff Patton	<ul style="list-style-type: none"> <li>• base version</li> </ul>
March 06	1.1	John Poole	<ul style="list-style-type: none"> <li>• minor changes</li> </ul>
May 06	2.0	VRW Schaa	<ul style="list-style-type: none"> <li>• new version: revive old T<sub>E</sub>X version which ended in 2005 leaving only fragments of code. Now incorporating several handwritten notes</li> </ul>
June 06	2.1	VRW Schaa	<ul style="list-style-type: none"> <li>• completely new and updated version (added: Autorun.inf, files delivered with script, Production of abstract booklet, etc.)</li> </ul>
July 2006	4.1	VRW Schaa	<ul style="list-style-type: none"> <li>• changed version number to get in synch with Matt's versioning of the »Proceedings Scripts« on <a href="http://www-esh.fnal.gov/SPMS/">http://www-esh.fnal.gov/SPMS/</a>.</li> </ul>
23. Jul 2006	4.2	vrws	<ul style="list-style-type: none"> <li>• Additions due to comments from Michael Abo-Bakr (Perl installation as non privileged user, WinEdt trial period, documentation for cURL deleted, error message from spmsbatch.pl)</li> <li>• documentation adapted to changed version of »pagecheck.pl«</li> <li>• L<sup>A</sup>T<sub>E</sub>X description for use of special characters in Abstracts embedded and adapted (errors in script corrected)</li> </ul>
30. Jul 2006	4.2a	vrws	<ul style="list-style-type: none"> <li>• got the original JACoW logo from John</li> <li>• L<sup>A</sup>T<sub>E</sub>X description for use of list environments corrected</li> </ul>
2. Aug 2006	4.2b	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl«</li> <li>• more L<sup>A</sup>T<sub>E</sub>X commands described which are converted (PNP12 conference)</li> </ul>
12. Aug 2006	4.2c	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.5.8) (»pdftop« destroys some of the PDF files (error 110). The code is commented out now</li> </ul>
16. Aug 2006	4.2d	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.5.9) featuring 'no links' to missing papers in \$paper_directory.</li> </ul>
15. Sep 2006	4.2e	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.5.10)</li> <li>• graphics and other included files moved to subdirectory »graphics-includes/«</li> </ul>
28. Sep 2006	4.3	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.5.11)</li> <li>• reconstructed version (after disk crash) with GPL sources in PDF</li> <li>• new version of conference reference file (now »SCS2007«)</li> </ul>
16. Mar 2007	4.4	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.6.4)</li> <li>• Update of required software versions</li> <li>• small update to production run sequence</li> </ul>
28. Aug 2007	4.8	John Poole	<ul style="list-style-type: none"> <li>• Library data, Repatriation and changed scripts</li> </ul>
21. Sep 2007	4.9	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.7.8)</li> <li>• new version of conference reference file (now »SCS2008«)</li> </ul>
23. Sep 2007	5.0	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.7.9)</li> <li>• complete update of JSPS manual</li> </ul>
14. Jan 2008	6.0	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.8.1)</li> <li>• update of JSPS manual in parts</li> </ul>
27. Feb 2008	7.0	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.8.2)</li> <li>• update of JSPS manual in parts</li> </ul>
15. Aug 2008	8.0	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.9.0)</li> </ul>
20. Oct 2008	9.0	vrws	<ul style="list-style-type: none"> <li>• new version of »spmsbatch.pl« (v.9.1)</li> <li>• complete update of JSPS manual</li> <li>• new version of conference reference file (now »SCS2009«)</li> </ul>

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<sup>1</sup>Chapter provided by John Poole

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# 1 Documentation Guideline

The PDF file you are reading is a self-contained document: it contains all scripts and files of the JACoW Proceedings Script Package (JPSP) which you will need for the production of a web site, abstract booklet, proceedings volume, and a CD-ROM together with the documentation how to use them.

This documentation is organized in the following way:

- ❶ Setup of your system with the required software to run the JACoW scripts (↔ section 2)
- ❷ Description of JACoW scripts, what they do, in which sequence to run, etc. (↔ section 3)
- ❸ Description of additional scripts to check for consistency and correctness (↔ section 5)
- ❹ Additional hints for handling error conditions, etc. (↔ section 8)
- ❺ List of scripts and documentation with versions and change history (↔ section 9)

In each of these sections the description of tools and scripts is as detailed as necessary to understand the basic functionality. A more extensive description is given in later sections.

*Note:* All references of products and packages contain links to web pages. Links in »blue« are external ones, links in »red« are document internal ones. Warnings and remarks are in this color: »warning«.



Due to an error in Adobe Acrobat, the name of an attached file is not shown in the printed version, to inform and warn you a tag is printed in the margin. All attached files in this PDF are named with the extension » .ZIPPED« because Acrobat Reader 7 won't let you access the file if it is named » .ZIP«. There is a security note in the Acrobat Support Knowledgebase ([Modify the default behavior of file attachments in Acrobat and Adobe Reader \(7.x and 3D on Windows and Mac OS\)](#)) but I do not recommend the use of InstallShield Tuner 7 to solve this problem the Acrobat way. So please save the file and rename the extension to one which is accepted by your extraction software.

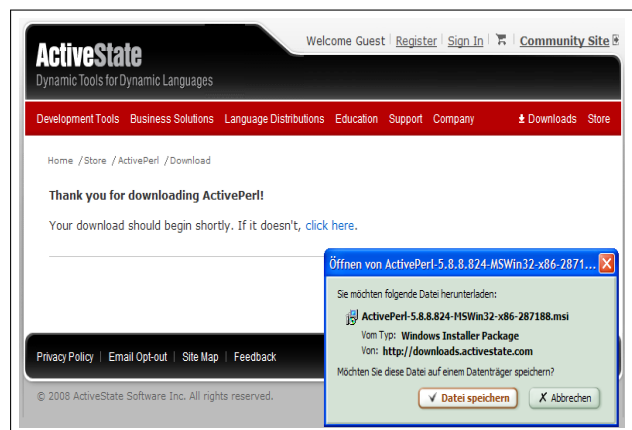
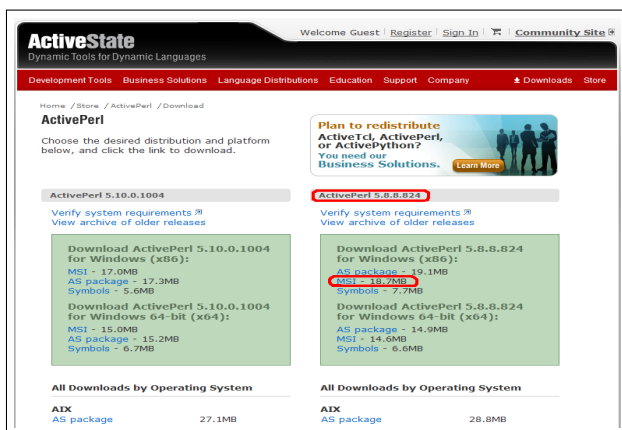
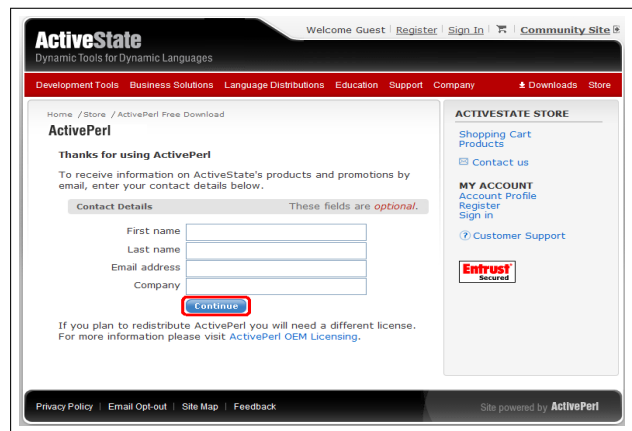
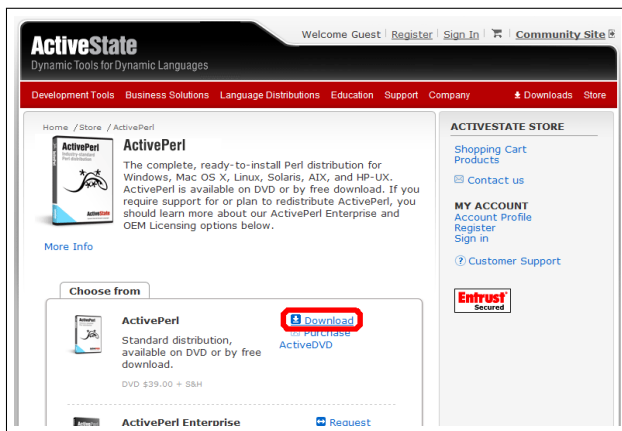
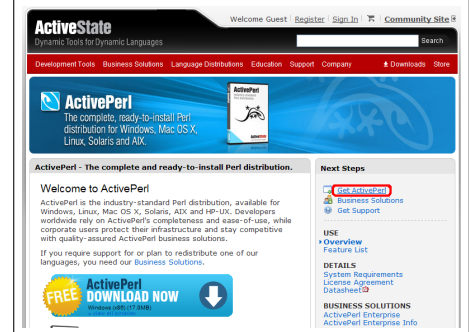
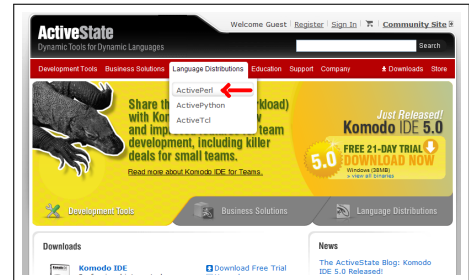
## 2 Software needed by the JACoW proceedings scripts

Before the JACoW proceedings scripts can be executed you will need to install the following software packages.

### 2.1 Perl

The Perl install package from ActivePerl is recommended, it is easy to install and always up to date (current version at date of printing: 5.10, which I haven't tested yet. That is the reason I recommend to use 5.8.8.824 for Windows (x86)). A direct, easy to follow link to this version does not exist anymore, so you have to start on [ActivePerl's](#) website. Follow the link to ActivePerl in the drop-down menu for Language Distributions (see first picture to the right). This link will bring you to the ActivePerl product page (second picture) where in the right column (titled Next Steps) the first underlined link shows Get ActivePerl. Use this link to get to the next page (first picture in the row below).

In the box titled Choose from you find in the first segment ActivePerl and to the right Download. Click this link to get to a form for Contact Details. You can directly click the Continue button because all fields are optional. This will finally bring you to the download page for different distributions and platforms. Select the MS windows package with MSI installer from the right column of the download page (Download ActivePerl 5.8.8.824 for Windows (x86)). The size is  $\approx 18.7$  MB, but you need a total of  $\approx 98$  MB hard disk space for a typical installation with documentation.



When starting the Perl Setup you can select which features or parts to install. If you want to use Perl just for the JACoW scripts, you can deselect the Documentation and Examples installation, thus saving  $\approx 2$  MB. Using Browse you can select the destination directory where Perl will be installed.

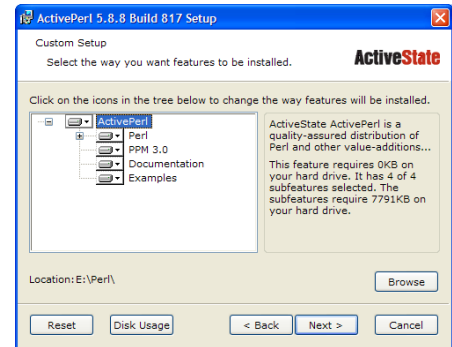
### Installation Notes

**Old Perl version:** If you have a different Perl version or installation already on your computer, you should try first that the scripts work with your Perl version/installation. If not, make sure that you remove the installation and unset any Perl Environment Variables (like PERLLIB, PERL5LIB, or PERL5OPT) before starting the installation of ActivePerl. Otherwise, these variables may cause incompatible versions of Perl modules to be used during the installation process.

**System read permission:** Do not launch the installation package from a directory for which the "System" account does not have read permission. If you do, the Windows Installer Service will not be able to access the MSI file in order to perform the installation. You may get an error message or it may fail mysteriously.

**Non privileged user:** On Windows NT/2000/XP/2003 systems ActivePerl installations must be performed by a privileged user. If you install ActivePerl without full administrator privileges, the following problems occur:

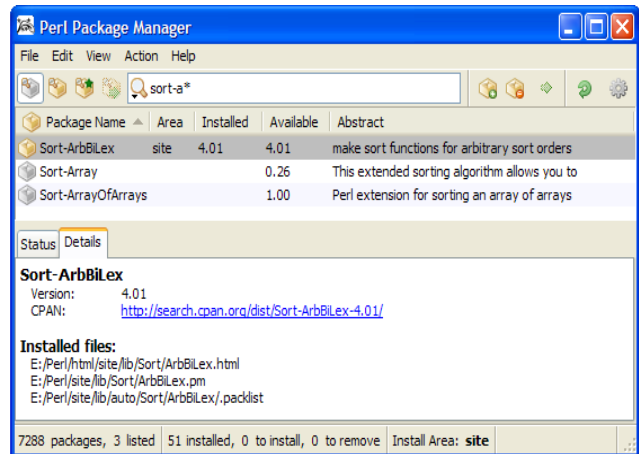
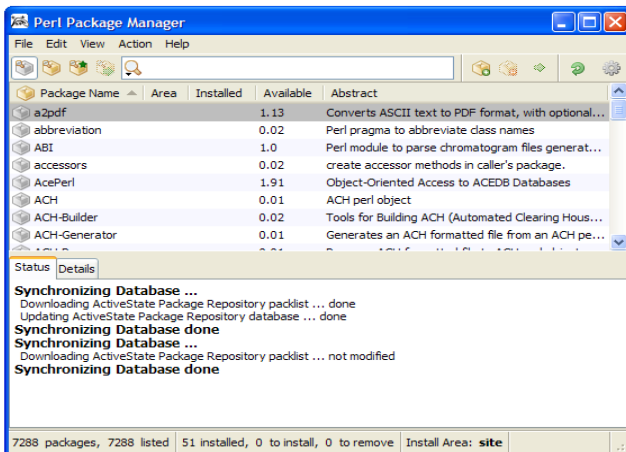
- Environment variables are set only for the current user.
- Registry entries are created under HKEY\_CURRENT\_USER and not under HKEY\_LOCAL\_MACHINE.
- ActivePerl applications will not write messages to the event log.
- ActivePerl only appears in the Add/Remove Programs list for the current user.



### 2.1.1 Additional Perl Module

In the proceedings script the special perl package »Sort-ArbBiLex« is needed, which is not automatically installed by ActivePerl. It is used for lexical sorting on the author names (containing accented characters and Umlauts). Loading of additional or updated perl packages is done using the Perl Package Manager (»ppm«).

You can do this either from a command prompt window by starting »ppm« or by selecting the Perl Package Manager from the program start menu under Activeperl. In both cases the following GUI will be started (see picture left below):



After startup the GUI shows (while being online) all available packages sorted alphabetically. You can search for the »Sort-ArbBiLex« package by typing »sort\*« into the filter bar. It will show you a list of installed or installable packages containing »sort« in the name or abstract description.

You can mark the »Sort-ArbBiLex« package for installation by typing »+« or using the install button (first right from the filter bar). Mistakenly marked packages can be corrected by using the Action option. The installation is done by selecting Run Marked Actions from the File option menu.

Now you are done with the Perl installation.

## 2.1.2 Checking the Installation

You should check that everything is setup correctly in a command prompt window by starting »perl«:

```
C:\IPAC10>perl -v

This is perl, v5.8.8 built for MSWin32-x86-multi-thread
(with 12 registered patches, see perl -V for more detail)

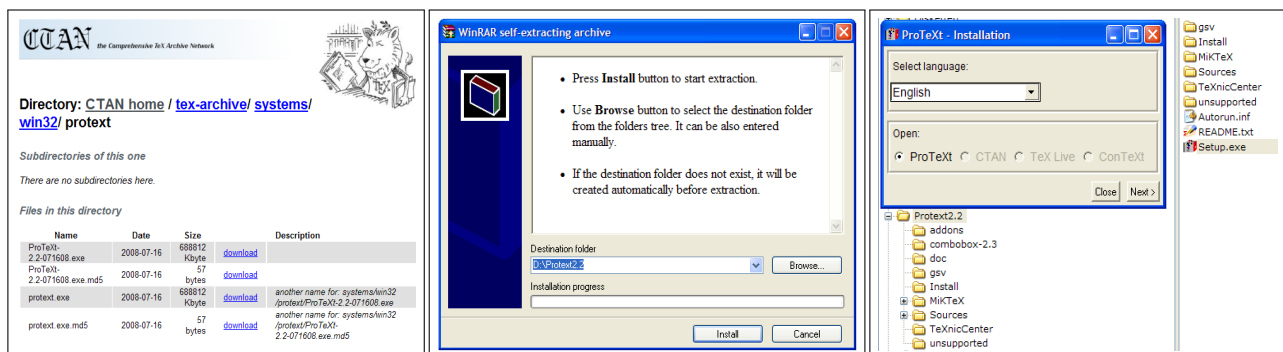
Copyright 1987–2007, Larry Wall

Binary build 824 [287188] provided by ActiveState http://www.ActiveState.com
Built Sep  3 2008 11:14:55
<...>
E:\IPAC10>
```

## 2.2 L<sup>A</sup>T<sub>E</sub>X

There are several T<sub>E</sub>X installation packages, the easiest to use is ProT<sub>E</sub>Xt. The installation is cleverly driven by the pdf installation document (available in English, French, German, and Italian). While reading the installation guide in Acrobat Reader you select various components, along with explanations, from a list of installable items.

You can download ProT<sub>E</sub>Xt from <http://www.tug.org/protext/> as a self-extracting image (size ≈ 673 MB). See leftmost figure, download location in this case is <http://ctan.tug.org/>, you will automatically get an archive mirror close to you. After downloading `protext.exe`, you start it by double clicking. Next you will see a display to specify the installation directory (figure in the middle).



Then you open the installation directory and start `Setup.exe`. This will open a display where you can select the interface language. Acrobat will then be started with the pdf installation document in the selected language.

In the 2008 version ProT<sub>E</sub>Xt can install:

**MiK<sub>T</sub>E<sub>X</sub>** a T<sub>E</sub>X implementation for Windows (<http://www.miktex.org/>).

**Ghostscript** an Open Source PostScript (PS) and Portable Document Format (PDF) previewer. Ghostscript itself only offers a command line interface, as GUI you need GSview (next item). See <http://www.ghostscript.com/>.

**GSview** is a graphical user interface (GUI) for Ghostscript (see above). GSview allows selected pages to be viewed, printed, or converted to bitmap, PostScript or PDF formats. It is free to use, if you want to disable the GSview nag screen (which requires to hit return), consider registering GSview, see <http://www.ghostgum.com.au/>.

**T<sub>E</sub>XnicCenter** is a feature rich integrated development environment (IDE) for developing L<sup>A</sup>T<sub>E</sub>X documents on Microsoft Windows (freely available under GPL, see <http://www.toolscenter.org/>)

MiK<sub>T</sub>E<sub>X</sub> and Ghostscript/GSview have to be installed, but you are free to take any command center (IDE) or editor you like.



## 2.2.1 WinEdt

People who are accustomed to WinEdt should consider to install an evaluation copy.<sup>2</sup> WinEdt is a powerful and versatile ASCII editor and shell for MS Windows with a strong predisposition towards the creation of L<sup>A</sup>T<sub>E</sub>X/T<sub>E</sub>X documents. It integrates seamlessly with a T<sub>E</sub>X system, such as MiK<sub>T</sub>E<sub>X</sub> or T<sub>E</sub>X Live. It is a shareware, see <http://www.winedt.com/>.

## 2.2.2 Checking the Installation

You should test the installation of L<sup>A</sup>T<sub>E</sub>X by typing the following command in a command prompt window:

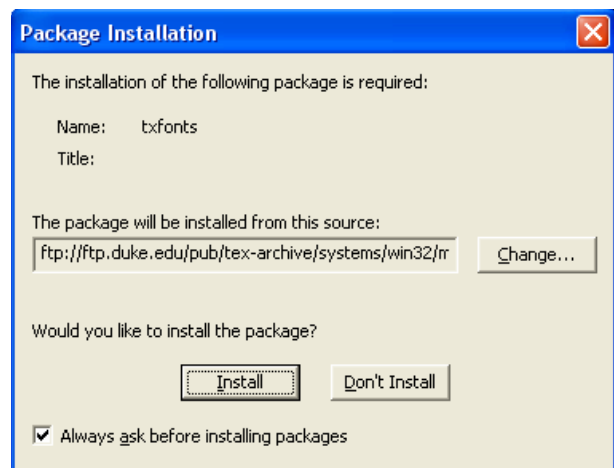
```
pdflatex sample2e.tex
```

The correct output using this command, version numbers and directory names may vary, important is that the run finishes without errors:

```
This is pdfTeX, Version 3.1415926-1.40.9 (MiKTeX 2.7) entering extended mode
("D:\ProTeXt2.2\MiKTeX 2.7\tex\latex\base\sample2e.tex" LaTeX2e <2005/12/01>
Babel <v3.81> and hyphenation patterns for english, dumylang, nohyphenation,
german, ngerman, german-x-2008-06-18, ngerman-x-2008-06-18, french, loaded.
<...>
Output written on sample2e.pdf (3 pages, 69525 bytes).
Transcript written on sample2e.log.
```

## 2.2.3 Autoloading of not Installed L<sup>A</sup>T<sub>E</sub>X Packages

A nice feature of the MiK<sub>T</sub>E<sub>X</sub> system is that it will prompt you to install a package the proceedings scripts references and which is not part of the base install. So you can use the minimum setup and let other packages be installed later when needed. But you have to make sure that there will be a network connection when you compile files which require new packages.



<sup>2</sup>Note: Due to the shareware status of WinEdt, a free trial period of 31+ days starts directly after installation (try-before-you-buy software). The unregistered trial copy is fully functional and stays that way. After the trial period a nag screen to register will appear increasingly often.

## 2.3 File Transfer Utility: wget

You need a file transfer utility to use the script »spmsread.pl«, the generated download command files (»pdfwget.bat«, »allwget.bat«, and others) or to download the XML output directly from the SPMS database in an encoding safe way. Starting the SPMS script for download ([http://<your\\_spms\\_address>/spms.xml](http://<your_spms_address>/spms.xml), e. g. <http://oraweb.cern.ch/pls/epac06/spms.xml>) in a browser window could lead to obscured character sequences and really big files which might even crash Internet Explorer. The way of downloading the XML in a browser window is only recommended for InDiCo conferences (see chapter 3.3.3) which deals with character encoding itself.

There are several candidates for file transfer, but in this readme only »wget« is described. If you are more familiar with a different file transfer utility you safely can use it, but you have to make sure that »wget« is installed because all scripts and generated command files use it.

GNU wget is a free software package for retrieving files using HTTP, HTTPS and FTP, the most widely-used Internet protocols. It is a non-interactive command line tool, so it can easily be called from scripts. GNU wget has many features to make retrieving large files or mirroring entire web or FTP sites easy. See the documentation on the [GNU wget site](#) for more details.



You can download a version for MS windows from the site <http://www.christopherlewis.com/WGet/WGetFiles.htm>. The actual stable release is »GNU Wget 1.11.4b« and comes as a ZIP file (1.66 MB). The installation is easy, you only have to unzip the file into a directory where the executable is found or add it to the actual »PATH« setting.

If you are going to use the »spmsread« script, you do not have to bother about the command line parameters of »wget« because its use is hidden by the script and generated download command files. Therefore the following paragraphs are just for information on direct use.

Starting a download of the conference XML file from SPMS using wget is done in the following way:

```
wget http://<your_spms_address>/spms.xml
```

Every download of the XML file »spms.xml« using the above notation will not overwrite an existing file but create a new one »spms.xml.1«, »spms.xml.2«, and so on. So **make sure that the downloaded file is used by the config** and control the download destination:

```
wget -O <file_name> http://<your_spms_address>/spms.xml  
wget --output-document=<file_name> http://<your_spms_address>/spms.xml
```

The command options »-O« (or »--output-document=«) will let you overwrite an existing »spms.xml«.

## 2.4 PDF utilities pdfindo, pdftotext, pdffonts, ...

The following PDF utilities are needed by some of the scripts: `pdfindo`, `pdftotext`, and `pdffonts`. These utilities are part of `xpdf` an open source viewer for PDF files and can be downloaded from the `xpdf` site. Look for precompiled binaries for **x86**, **DOS/Win32**. There should be an entry with `pdfops`, `pdftotext`, `pdfimages`, `pdfindo`, and `pdffonts` only with a link to a file like `xpdf-<version>-win32.zip` (size is  $\approx 2.03$  MB): <http://www.foolabs.com/xpdf/download.html>. The actual `<version>` is 3.02p12 of 2007-Nov-07. It now supports PDF version 1.6 and 1.7 and has some security patches (patch level 2).

### Precompiled binaries

Precompiled binaries are available for the following machines:

- **x86, Linux** (glibc 2.2, statically linked to Motif, t1lib, and FreeType):  
[xpdf-3.02p12-linux.tar.gz](#) (6615400 bytes)
- **SPARC, Solaris 2.x** (statically linked to t1lib and FreeType):  
[xpdf-3.02p12-solaris.tar.gz](#) (6382550 bytes)
- **x86, DOS/Win32** -- `pdfops`, `pdftotext`, `pdfimages`, `pdfindo`, and `pdffonts` only:  
Win32 (built with MSVC): [xpdf-3.02p12-win32.zip](#) (2027995 bytes)  
DOS6 (built with djgpp, with DPML support from csdpmi5b): [xpdf-3.02p12-dos6.zip](#) (1745421 bytes)

Install the binaries where they could be found from a command prompt window (set `path`), a test reveals:

```
D:>pdfindo
pdfindo version 3.02
Copyright 1996-2007 Glyph & Cog, LLC
Usage: pdfindo [options] <PDF-file>
  -f <int>      : first page to convert
  -l <int>      : last page to convert
  -box          : print the page bounding boxes
  -meta        : print the document metadata (XML)
  -enc <string> : output text encoding name
  -opw <string> : owner password (for encrypted files)
  -upw <string> : user password (for encrypted files)
  -cfg <string> : configuration file to use in place of .xpdfrc
  -v           : print copyright and version info
  -h           : print usage information
  -help        : print usage information
  --help       : print usage information
  -?           : print usage information
```

A real live example from a JACoW conference pdf file will show:

```
D:>pdfindo D:\DIPAC2005\PAPERS\CTMM02.PDF
Title:      Micro-strip Metal Foil Detectors for the Beam Profile Monitoring
Subject:    Proceedings of DIPAC 2005
Keywords:   monitoring, electron, radiation, photon, ion
Author:     V.M. Pugatch, V.E. Aushev, NASU/INR, Kiev; C. Bauer, MPI-K, Heidelberg;
           M. Braeuer, DESY, Hamburg; O.A. Fedorovitch, NASU/INR, Kiev; H. Franz,
           DESY, Hamburg; V.G. Karengin, NASU/IM, Kiev; A.V. Mikhailenko, NASU/INR,
           Kiev; V.L. Perevertailo, NASU/IM, Kiev; S.V. Prystupa, Y.V. Pylypchenko,
           NASU/INR, Kiev; M.T. Schmelling, MPI-K, Heidelberg; K. Wittenburg, DESY,
           Hamburg
Creator:    LaTeX with hyperref package
Producer:   pdfTeX-1.21a
CreationDate: 02/24/06 15:45:01
Tagged:     no
Pages:      3
Encrypted:  no
Page size:  592.777 x 789.041 pts
File size:  233533 bytes
Optimized:  no
PDF version: 1.4
```

## 2.5 Autorun Inf Editor

You will need this editor if you are planning to produce a CD-ROM with »autoplay« characteristics.<sup>3</sup> When a CD is put into the drive, the operating system looks for the »autorun.inf« file. If the file exists, it reads it and then knows how to »autoplay« the CD.

The Autorun.inf Editor is a free utility which makes it easy to create own »autorun.inf« files. With the editor you can create an autorun.inf file that can:

- Set a label for the CD-ROM (this label will be displayed in »My Computer« and »Explorer« on a Windows computer)
- Set an icon for the CD-ROM
- Specify a program on the CD-ROM (or user's computer) to run when the CD-ROM is inserted
- Add entries and commands to the context menu for when a user right-clicks on the CD-ROM

You can get the zip file from [Moon Valley Software](#). After a registration with name, email address, zip code, and country information the download link will be emailed to you. For easy access I have included this zip file ([AIF10.ZIPPED](#)) in the documentation PDF.<sup>4</sup> This file is named with the extension ».ZIPPED« because Acrobat Reader 7 won't let you access the file if it is named ».ZIP« (see the remark in section 1 on page 5).

As an example for the »autorun.inf« file generated by the AIF Editor see the file below (example for the LINAC2004 conference), the user interface to AIF you can see on the right:

```
1 [autorun]
2 open=Opener.exe index.htm
3 Shell\Option1=Website LINAC2004
4 Shell\Option1\Command=opener.exe http://bel.gsi.de/linac2004/index.html
```

Line 2 defines that »index.htm« will be opened with the helper program »Opener.exe« which is an utility you will find in the file AIF10.ZIPPED. If you do not specify an relative path, »Opener.exe« has to reside in the root directory (SCS2008\_CD in our case).

Due to problems in Windows XP where »Icon« and »Label« cannot be shown, these entries are not used.

Line 3 shows the text which will appear in the context menu when you right click on the CD-ROM and the little menu pops up. Line 4 specifies the action that will happen when the user selects it (see figure below).

CD Context menu with additional option

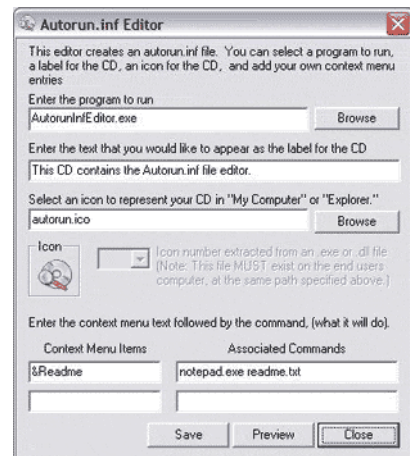
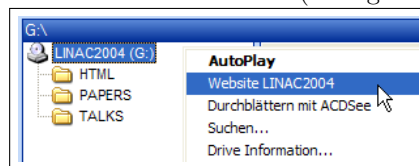


Figure 1: Autorun.inf Editor

Please read the step by step instructions in »AutorunInfEditor.chm« to understand the possibilities you have with AIF.

<sup>3</sup>Be aware that there might be problems with a CD-ROM using this »autoplay« characteristics. If I remember correctly from the 2007 Trieste team meeting Hywel Owen mentioned that there had been problems reading such a CD-ROM on an iMac. So if you are going to try this feature on mass produced CD-ROMs make sure on various operating systems that there are no problems reading the CD.

<sup>4</sup>From the Moon Valley Software web site: This program may be freely distributed as-is.

## 2.6 Ruby Scripting Language

The installation of Ruby is not mandatory. Ruby is only needed if you want to generate and print an Abstract Booklet (↔ section 4.2) for pre-conference information.

A Ruby installation for Windows can be found at the One-Click Installer – Windows on [RubyForge](#). There you will find lots of versions and always the last stable one. The actual stable release is »ruby-1.8.6-26«.



Figure 2: Ruby Download Website



Figure 3: Ruby Setup Wizard

Select the windows package (.exe) for download (the size now is  $\approx 23.7$  MB). The installation is very easy, after installing Ruby the directory where the executables are found (e.g. D:\Ruby\bin) has been added the actual »PATH« setting.

The required space for the unpacked Ruby distribution is  $\approx 86$  MB.

You should check that everything is setup correctly in a command prompt window by starting »ruby«:

```
c:\ipac11>ruby --version
ruby 1.8.6 (2007-09-24 patchlevel 111) [i386-mswin32]
```

This is important because the command »texexec« will just die without any output or warning if Ruby is not installed or the executable is not found.

### 3 JACoW Scripts and Command Procedures

The general setup and the execution of the JACoW scripts are first listed in sequence and described in detail later.

- ❶ Setup of local site for JACoW scripts
  - ① Setup scripts and base directories with SCS2009.ZIPPED (↔ section 3.1)
  - ② Adapt the configuration file »conference.config« to your needs (↔ section 3.2)
- ❷ Pre-conference run (↔ section 4.1)
  - ① Download the conference XML file from SPMS or InDiCo (↔ section 3.3)
  - ② For the production of an Abstract booklet run the »spmsbatch.pl« script to generate the source input for the Abstract booklet (↔ section 3.4)
  - ③ Start ConT<sub>E</sub>Xt (it's a variant of T<sub>E</sub>X like L<sup>A</sup>T<sub>E</sub>X) to compile the generated files and produce an Abstract booklet (↔ section 4.2)
- ❸ Production run (↔ section 4.1)
  - ① Download the conference XML file from SPMS or InDiCo, make sure for SPMS conferences that after »Final QA« paper TOC values have been generated (↔ section 3.8.1), for InDiCo conferences see item ❸ (↔ section 3.3)
  - ② Use the batch file »pdfwget.bat« to download the PDF files of the edited papers, the transparencies and posters from SPMS or InDiCo. The files will be placed automatically in the correct directory (papers into »raw\_paper\_directory«, transparencies into »slides\_directory« and posters in »posters\_directory«) (↔ section 3.5)
  - ③ For InDiCo conferences generate now page count and TOC values using the script »generate\_toc.pl« (↔ section 3.8.2)
  - ④ Run the script »pagecheck.pl« to compare the number of pages a pdf file has in the SPMS database against the real pdf file, find deviations in page count, paper size, PDF version, font inclusion from the JACoW standard (↔ section 5.2)
  - ⑤ Run the script »scan-keywords.pl« to generate the list of used keywords (↔ section 3.7)
  - ⑥ Run the script »spmsbatch.pl« to generate web pages, the T<sub>E</sub>X files for the proceedings volume and to package the papers from »./PAPERS-FINAL« (↔ section 3.4)
  - ⑦ Run the command file »gen\_texpdf.bat« in »./papers« to package the raw files (adding page numbers, header and footer lines, fill hidden fields with keywords, etc.) (↔ section 3.6)
  - ⑧ Rerun the script »spmsbatch.pl« again to make sure that all links are generated.
  - ⑨ Copy all files ./papers/\*.pdf, ./html/\*.\*, ./talks/\*.pdf, ./audio/\*.mp3 and ./posters/\*.pdf, and the final »index.htm« to the webserver directories
- ❹ Check of consistency (↔ section 5)
  - ① Check the generated pdf files for completeness (↔ section 5.1)
  - ② Use Xenu to check the script generated web pages for broken links and orphan files (↔ section 5.3)
- ❺ Compare all errors that have occurred and could not be explained to the ones documented in section »Known Bugs« (↔ section 8).

### 3.1 Script Setup

The JACoW scripts and an example setup are included as a zip file in this PDF. You can extract it and unzip it in the main directory of your conference proceedings. It is called **SCS2009.ZIPPED** which stands for **S**ample **C**onference **S**etup **2009**. Right click on the file name to get more infos and open or save the file to disk. This file is named with the extension ».ZIPPED« because Acrobat Reader 7 or 8 won't let you access the file if it is named ».ZIP«. There is a security note in the Acrobat Support Knowledgebase ([Modify the default behavior of file attachments in Acrobat and Adobe Reader \(7.x and 3D on Windows and Mac OS\)](#)) but I do not recommend the use of InstallShield Tuner 7 to solve this problem the Acrobat way. So please save the file and rename the extension to one which is accepted by your extraction software.

The Conference Sample Setup file creates a directory structure in accordance with the basic configuration file, and places the Perl scripts and T<sub>E</sub>X files in the correct directories (see contents of »conference.config«).

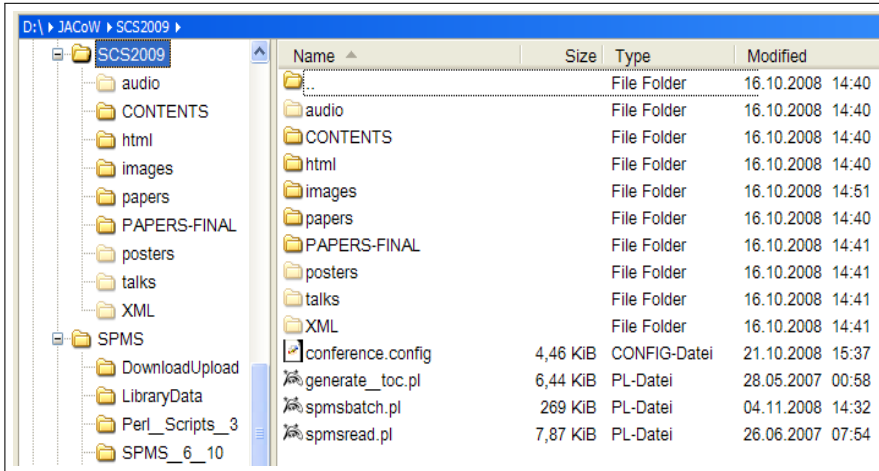


Figure 4: Standard layout for Sample Conference working directories

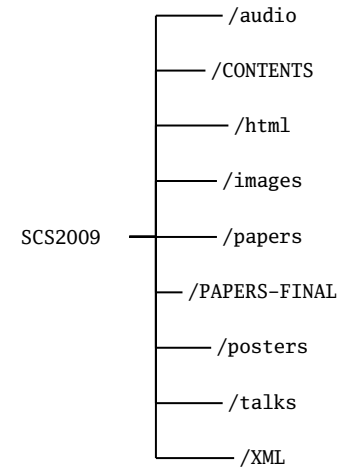


Figure 5: Basic layout

A distinction is drawn between the »lowercase« and »UPPERCASE« directory names. The »lowercase« ones will later go to the JACoW web site (if containing files) and on the CD-ROM, the »UPPERCASE« ones are just working directories which are used only during the production phase, generation of the web site and the proceedings volume, script runs, etc.

The purpose of the created subdirectories is as follows (listed in alphabetical order):

- The »audio« directory will hold (if used) the audio files of the conference talks (.mp3).
- The »CONTENTS« directory will hold intermediate .TEX files like authors and institutes lists, participants list etc. The scripts will write these intermediate .TEX files to this location.
- The »html« directory will hold all the generated HTML files (.htm) and the cascading style sheet (.css).
- The »images« directory will hold all image files needed for the graphic icons in the generated HTML files, institutes' logos, and logos for the JACoW web site (.jpg, .gif, .png).
- The »papers« directory will hold the final conference pdf files (.pdf), including the proceedings volume and abstract booklet (if requested in the config file).
- The »PAPERS\_FINAL« directory will hold the conference pdf papers in the raw state as they come from SPMS or InDiCo (without any markup of the conference, like page numbers, classification or conference name).
- The »talks« directory will hold the conference slide files (.pdf).
- The »posters« directory will hold the conference posters (.pdf) (for conferences willing to collect and publish posters on their website).
- The »XML« directory is dedicated for all XML files which are downloaded from SPMS or InDiCo and read by JPSP.

## 3.2 Config Setup

What you need to check is the configuration file. The file »conference.config« contains all directory settings, default tags and switches for the generation of abstract booklet and proceedings.

All configuration parameters concerning the conference setup are set in lines 28...39. The parameters are split into two blocks: »conference setup« (lines 28...34) and »post conference setup« (lines 35...39). The post conference values are used for generation of data sets for Spires, Inspire, arXiv.org, DOI, etc.

The »conference\_xmlfile« points to the XML file downloaded from SPMS or InDiCo. The directory where this file is read from is determined by the directory specification »xml\_directory« (see line 67).

```
1 #***** set of 12-Aug-2008
2 # Conference Setup (which is split between conference and post-conference setup.
3 #           conference setup      is used for generating abstract booklet,
4 #                               web pages, and proceedings
5 #           post-conference setup is used to generate data for SPIRES/INSPIRE/DOI etc.
6 #
7 # conference setup
8 #-----
9 #   conference
10 #       _xmlfile  contains only the 'filename' not the directory (like 'xml_directory')
11 #       _logo     contains only the 'filename' not the directory (like 'img_directory')
12 #       _logo_size provides the 'width'x'height' of the logo as it should be displayed
13 #       _url      conference URL (should be for JACoW http://jacow.org/xyz/ [xyz look
14 #               up from directory name on JACoW web site, e.\,g. e08 for EPAC08])
15 #       _respm    e-mail address of the responsible person for generating the web pages,
16 #               for the conference or the conference editor
17 #       _name     name of the conference
18 #       _site     contains City and Country of the conference venue
19 #
20 # post-conference setup
21 #-----
22 #       _longname complete name of the conference with abbreviation/title/series/date/place
23 #       _isbn     ISBN of the published (web based) Proceedings
24 #       _pub_date date of publication
25 #       _pub_by  publisher or published by
26 #       _pub_copy Copyright of the publication
27 #
28 conference_xmlfile = spms.xml
29 conference_logo    = logo.jpg
30 conference_logo_size = 70x70
31 conference_url     = http://jacow.org/e08/
32 conference_respm   = v.r.w.schaa@gsi.de
33 conference_name    = EPAC08
34 conference_site    = Genoa, Italy
35 conference_longname = EPAC'08, 11th European Particle Accelerator Conference, 23-27 June 2008, Genoa, Italy
36 conference_isbn    = ISBN 978-92-9083-315-4
37 conference_pub_date = Aug 2008
38 conference_pub_by  = Published by the European Physical Society Accelerator Group (EPS-AG)
39 conference_pub_copy = © 2008 by EPAC
```

The parameters of the »post conference setup« (lines 35...39) are explained in the »conference.config« file in lines 22...26 and used only for data set generation for Spires, Inspire, arXiv.org, DOI, etc.



The »conference\_logo« is used on the banner page<sup>5</sup> as you can see on the left in figure 6. The directory where the logo can be found is defined by »img\_directory« on line 31. The parameter »conference\_logo\_size« can be used to provide enough (vertical) space for the conference name (»conference\_name« and »conference\_site«) which are displayed in the banner, it has not to be the exact size of the logo which will be scaled anyway. The size is given in pixel format »Hor x Vert«. The word »Proceedings« is automatically attached to the »conference\_name«. The »conference\_url« is linked with the conference logo<sup>6</sup>.

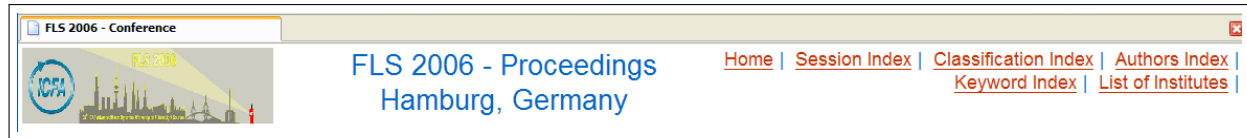


Figure 6: Banner page with conference logo and conference name and site

```
40 #*****
41 # other files
42 #
43 debug_file = protocol.txt
```

The »debug\_file« is used for debugging output by the Perl script »spmsbatch.pl«. All print statements of the format »print DBG« go to this file.


```
44 #***** Proceedings of EPAC08
45 # directories
46 #   base_url      base for reference links from docs, papers, pages [index.html]
47 #   content_     this is where the time-schedule, dividing sheets, pictures, etc. are coming from
48 #   html_        for all html-files [.html]
49 #                (author, keyword, institute, session, ...)
50 #   audio_       for audio recordings
51 #   slides_      for all transparency files (<papercode>_talk.pdf)
52 #   img_         for all images [.png, .jpg, .gif, ...]
53 #   paper_       for all papers *with* embedded infos [.pdf]
54 #                (keyword/author/..., conference tag, page numbers, etc.) [.pdf]
55 #   raw_paper_   for all papers *without* embedded infos [.pdf]
56 #                (just the processed files from JACoW editors)
57 #   xml_         for all xml related files
58 #   poster_     for all poster files (<papercode>_poster.pdf)
59 #
60 base_url        = http://jacow.org/e08/index.htm
61 content_directory = ./contents/
62 html_directory  = ./html/
63 audio_directory = ../audio/
64 slides_directory = ../talks/
65 img_directory   = ../images/
66 paper_directory = ./papers/
67 raw_paper_directory = ../papers-final/
68 xml_directory   = ./xml/
69 poster_directory = ../posters/
```

The lines 60..69 contain the parameters for several directories and the base url. The »base\_url« is used on the banner page (see fig. 6) for the URL entry »Home«. The »content\_directory« is a place where files for the proceedings volume are coming from or are written to, i. e. the lists for authors and institutes (authtexidx.tex, insttex.tex). The »html\_directory« is used for all generated web pages for authors list, keyword index, institutes list, session list, and classification index. The style sheet for these web pages (confproc.css) has to be placed here too. In the »slides\_directory« all PDF files with slides from talks are placed conforming to »<papercode>\_talk.pdf«. From the »img\_directory« the pictograms to designate links for slides (📄), videos (🎥), posters (📄), or audio files (🔊) are taken. The graphic images for icons, institutes' logos and logos for the JACoW web site are placed here.

<sup>5</sup>and on the generated index file »indexloc.htm« which makes the web site more easily accessible before you have produced your own adapted web index page.

<sup>6</sup>And on »indexloc.htm« too.

The »xml\_directory« specifies the directory to which all XML files are downloaded from SPMS or InDiCo and from where they are read by JPSP. This directory is also used for the »conference\_xmlfile« in line 28, an XML file will always be searched in »xml\_directory«.

For conferences willing to collect and publish posters on their website, the »poster\_directory« can be defined. The corresponding file should be named »<papercode>\_poster.pdf« and downloaded into this directory. Only files present in this directory will get a link with the poster pictogram .

The »paper\_directory« will be the destination of all »packaged« PDF files. »packaged« means that the »raw« PDF files taken from »raw\_paper\_directory« have received their correct page numbers, header and footer lines. In the »raw\_paper\_directory« only PDF files may be placed which had been uploaded to SPMS after the JACoW editing process including final Quality Assurance (QA) or from InDiCo where the responsible editor has to make sure that these PDF files conform to the page specification.

The »paper\_not\_received\_link« parameter (line 84) is used to determine how papercodes are treated when no files have been uploaded by the author. Normally for these papercodes a PDF file will be generated which consists of title, list of authors, abstract, and the text defined for the »paper\_not\_received\_text« parameter (example ↪ page 25). If the parameter is »0« no files are produced and no link from the »paper\_code« is generated.

The »paper\_not\_received\_text« parameter is used for defining the text which will be put in papers when the final text has not been sent by the author. Before the final deadline mostly the text »PAPER NOT YET RECEIVED« is used, after the deadline this is changed to »CONTRIBUTION NOT RECEIVED«.

```
70 #*****
71 # paper_not_received_link = "0|1"
72 #   if "paper_not_received_link = 0" no TeX and PDF files will be generated
73 #   for missing papers, therefore no link in any of the lists (session,
74 #   classification, author, and keyword) will be generated. In this case the
75 #   entry in "paper_not_received_text" will not be used
76 #
77 # paper_not_received_text = "text"
78 # text to be put in papers when the final text has not been sent by the author
79 #   DIPAC2003 used "PAPER NOT YET RECEIVED" before finalizing
80 #           and "PAPER NOT RECEIVED" after submission stop
81 #   EPAC      uses "CONTRIBUTION NOT RECEIVED"
82 #
83 paper_not_received_text = PAPER NOT YET RECEIVED
84 paper_not_received_link = 1
85 #*****
86 # sort_authors_lexically "yes|no"
87 #           for lexical sorting (of authors names). Using the package "ArbiLex"
88 #           offers sort functions for arbitrary sort orders
89 #
90 use_arbilex_sorting = yes
91 #*****
92 paper_ftn_switch = 1           # footnotes will (not=0) be included
93 paper_agy_switch = 0          # funding notes will (not=0) be included
94 proceedings_volume_switch = 0 # Proceedings volume will (not=0) be produced
95 context_switch = 0           # (do not=0) generate a ConTeXt abstract booklet
```

With »use\_arbilex\_sorting« you define that a lexical sorting of authors names should be used. This is mostly important for names with accented characters (»öüëäçïöü« and so on). On page 7 the installation of the Perl package »Sort-ArbBiLex« was shown.

```
85 #*****
86 # sort_authors_lexically "yes|no"
87 #           for lexical sorting (of authors names). Using the package "ArbiLex"
88 #           offers sort functions for arbitrary sort orders
89 #
90 use_arbilex_sorting = yes
```

- B.W. Adams  
ANL, Argonne, Illinois

**Funding:** *This work was supported by the U.S. Department of Energy, Office of Basic Energy Sciences under contract W-31-109-ENG-38.*

An important tool to study the fundamental processes of chemistry and solid-state physics is the femtosecond-resolving visible/IR pump, x-ray probe technique. It requires ultrashort pulses of light and x-rays in few-femtosecond synchronism with each other. Here, a scheme is proposed to derive both types of radiation from the same electrons in an emittance-sliced XFEL [1]. For this, the same emittance contrast that is imposed onto the bunches in an XFEL to modulate the SASE process is also used to generate a coherence enhancement of transition undulator radiation [2] (TUR). This results in an intense single-cycle pulse of near-infrared, coherent TUR (CTUR) light that is perfectly synchronized to the SASE x-rays, and has about 100 micro-Joules of energy (based upon LCLS parameters). The idea will be presented and conceptual issues will be discussed, such as near-field effects in the CTUR.

[1] P. Emma et al., *Phys. Rev. Lett.* **92**, 074801 (2004)

[2] K.-J. Kim, *Phys. Rev. Lett.* **76**, 1244 (1996)

The last four lines in the file »conference.config« are switches to control the generation of notes on web pages or paper volumes for the conference. Switch »paper\_ftn\_switch« controls (»1« for footnotes, »0« for no footnotes) the appearance of footnotes on the web pages (see the figure to the left in the lower part [1] and [2]). The switch »paper\_agy\_switch«

controls (»1« for print funding note, »0« for no funding notes) the output of funding notes (see text **Funding:** in upper part of figure) directly under the authors' list.

With »proceedings\_volume\_switch« you control the generation of a proceedings volume (»1« yes, »0« no), »context\_switch« determines whether an abstract booklet is produced.

```

91 #*****
92 paper_ftn_switch = 1           # footnotes will (not=0) be included
93 paper_agy_switch = 0           # funding notes will (not=0) be included
94 proceedings_volume_switch = 0  # Proceedings volume will (not=0) be produced
95 context_switch = 1            # (do not=0) generate a ConTeXt abstract booklet

```

### 3.3 XML Download

The ways to download the XML file from SPMS and InDiCo conferences are different:

- 1 Bigger SPMS conferences like APAC, EPAC and PAC (XML file 5 MB... 20 MB) should only use the download script »`spmsread.pl`«. This script downloads the XML as session chunks which are small enough (0.5... 1.5 MB) so that the SPMS system will not trigger the web server's timeout (↔ section 3.3.1).
- 2 Smaller SPMS conferences (smaller than APAC/EPAC/PAC) can use the direct »`wget`« approach (↔ section 3.3.2) but it might be safer to use the download script »`spmsread.pl`« too.
- 3 InDiCo conferences use a special JACoW view to generate and access the XML. This view can be accessed by completing the following line with the InDiCo conference identifier »`confId=`«.

```
http://indico.cern.ch/conferenceOtherViews.py?view=jacow&fr=no&confId=
```

For details ↔ section 3.3.3.

#### 3.3.1 XML Download – `spmsread.pl`

Using the script `spmsread.pl` to download the conference XML file from SPMS is done in the following way:

```
spmsread.pl http://<your_spms_address>/
```

Using »`spmsread.pl`« on a production SPMS like COOL'07 will show the name of the XML file in line 7 from »`conferences.config`«. If an old XML file already exists (line 8) it will be saved as a backup under the original name with date and time of its creation attached (line 9).

```
1 C:\Conferences\COOL07>spmsread.pl http://www-oracle.gsi.de/pls/cool07/
2
3 URL: http://www-oracle.gsi.de/pls/cool07/
4
5 config file 'conference.config' found!
6
7 xml file from config is: 'spms.xml'
8 File ->./xml/spms.xml<- already exists!
9 File ->./xml/spms.xml<- will be saved as ->./xml/spms-20070923-204446.xml<-
10 1 file(s) copied.
11 --20:04:34-- http://www-oracle.gsi.de/pls/cool07/spms_summary.xml
12 => './xml/spms_summary.xml'
13 Resolving www-oracle.gsi.de... done.
14 Connecting to www-oracle.gsi.de[140.181.67.66]... connected.
15 HTTP request sent, awaiting response... 200 OK
16 Length: 1,402 [text/html]
17
18 100%[=====>] 1,402 1.34M/s ETA 00:00
19 20:04:35 (1.34 MB/s) - './xml/spms_summary.xml' saved [1402/1402]
20
21 basic spms file './xml/spms_summary.xml' found!
22 loading xml file for session MOM1
23 --20:05:06-- http://www-oracle.gsi.de/pls/cool07/xml2.session?sid=MOM1
24 => './xml/MOM1.xml'
25 Resolving www-oracle.gsi.de... done.
26 Connecting to www-oracle.gsi.de[140.181.67.66]... connected.
27 HTTP request sent, awaiting response... 200 OK
28 Length: 19,322 [text/html]
29
30 100%[=====>] 19,322 471.73K/s ETA 00:00
31 20:05:07 (471.73 KB/s) - './xml/MOM1.xml' saved [19322/19322]
32
33 xml file for session MOM2 already exists
34 <-->
```

```
35 xml file for session FRM1 already exists
36 elapsed time: 1.39 [s]
```

In the next step (line 11–19) the script tries to read the summary file (»spms\_summary.xml«) from SPMS, which just contains the basic conference scheme with <session> tags for each session in the conference:

```
<?xml version="1.0" encoding="iso-8859-1" ?>
<conference name="COOL07, Bad Kreuznach">
  <session>
    <name abbr="MOM1">Monday Morning Session 1</name>
  </session>
  <session>
    <name abbr="MOM2">Monday Morning Session 2</name>
  </session>
  <- more lines ->
</conference>
```

After downloading the summary file the script starts reading it and checks for each session whether »<session>.xml« is already present in the »xml\_directory«. If there is no file (like »MOA1.xml« in the example, see lines 22–31) it is read from the SPMS server and the contents is added to the new »spms.xml«.

If a file (like »MOA2.xml« in line 33) is already present in the »xml\_directory« downloading from the SPMS server will be skipped with the message »xml file for session 'xxx' already exists« and the existing (old »MOA2.xml«) XML file will be added to »spms.xml«. So if you just want to update (download) a changed session you have to delete the corresponding XML file in the »xml\_directory« and run the script.

Deleting »spms\_summary.xml« and all the session XML files will lead to a complete update of the conference XML file.

### 3.3.2 XML Download – wget

Starting a download of the conference XML file from SPMS using wget is done in the following way:

```
wget http://<your_spms_address>/spms.xml
```

Every download of the XML file »spms.xml« using the above notation will not overwrite an existing file but create a new one »spms.xml.1«, »spms.xml.2«, and so on. So **make sure that the downloaded file is used by the config** and control the download destination:

```
wget -O <file_name> http://<your_spms_address>/spms.xml
wget --output-document=<file_name> http://<your_spms_address>/spms.xml
```

The command options »-O« (or »--output-document=«) will allow you to overwrite an existing »spms.xml«.

Using wget on a production SPMS like EPAC'06, you will get a display output similar to the following:

```
wget --output-document=epac06.xml http://oraweb.cern.ch/pls/epac06/spms.xml
--16:24:03-- http://oraweb.cern.ch/pls/epac06/spms.xml
=> 'epac06.xml'
Resolving oraweb.cern.ch... done.
Connecting to oraweb.cern.ch[137.138.203.145]:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 9,044,569 [text/html]

100%[=====] 9,044,569 711.27K/s ETA 00:00

16:26:21 (711.27 KB/s) - 'epac06.xml' saved [9044569/9044569]
```

Today you most probably will run into the web server's time-out when downloading conferences of this size (see ↔ section 3.3.1 for a better way to do it).

### 3.3.3 XML Download – InDiCo

InDiCo conferences use a special view to generate and access the XML. From browsing an InDiCo conference display (see left picture) it is actually a short way to get the corresponding XML file (right picture).

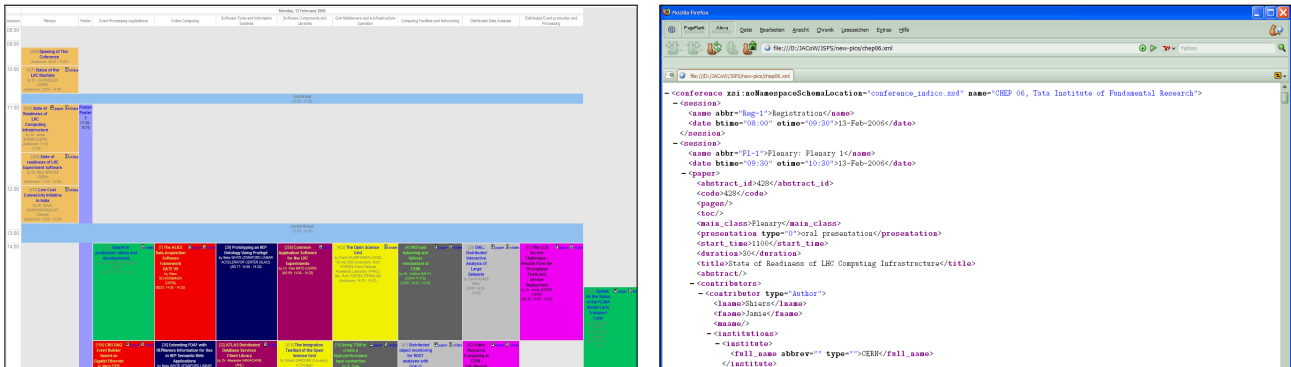


Figure 7: InDiCo conference in parallel display mode: (left) HTML view, (right) JACoW XML view.

You can access the XML of the conference you are browsing by adding the InDiCo conference identifier number (»confId=xxxx«) to the following line:

```
http://indico.cern.ch/conferenceOtherViews.py?view=jacow&fr=no&confId=
```

The XML will be displayed automatically in the web browser window. The XML code has then to be committed to file using »cut and paste« or »File → Save as...«.

The workflow for InDiCo after downloading the XML file is the same as for SPMS: run `spmsbatch` (↔ section 3.4).

### 3.4 JACoW Main Build Script: `spmsbatch.pl`

This script is run after downloading the conference XML file (↔ section 3.3). It is started on the directory where »`conference.config`« resides:

```
E:\COOL07>spmsbatch.pl
```

You will get a number of messages on the screen during the script's run: about the XML file, the logo and all sessions found in the XML file.

```
1 Subroutine Cwd::fastcwd redefined at E:/Perl/lib/Cwd.pm line 699.
2 Subroutine Cwd::getcwd redefined at E:/Perl/lib/Cwd.pm line 699.
3 Subroutine Cwd::abs_path redefined at E:/Perl/lib/Cwd.pm line 699.
4
5 config file 'conference.config' found!
6
7 config file points to './xml/spms.xml'
8 logo: 70 x 70
9
10 Conference XML 'COOL 2007' Type 'SPMS' opened
11 going to close session '0' [chairs 1] : Monday Morning Session 1
12 going to close session '1' [chairs 1] : Monday Morning Session 2
13 <...>
14 going to close session '9' [chairs 1] : Wednesday Morning Session 2
15 going to close session '10' [chairs 1] : Thursday Morning Session 1
16 going to close session '11' [chairs 1] : Thursday Morning Session 2
17 --> Papercode: THAP01 ### Documentname: ATHAP01.DOC
18 --> Papercode: THAP02 ### Documentname: ATHAP02.DOC
19 going to close session '12' [chairs 0] : Thursday Afternoon Poster Session
20 --> Affiliation Request Pending for Larijani
21 --> Affiliation Request Pending for Radovanov
```

```

22 going to close session '13' [chairs 1] : Thursday Afternoon Teatime Talk
23 going to close session '14' [chairs 1] : Friday Morning Session 1
24 going to close session '15' [chairs 1] : Friday Morning Session 2
25
26 Conference XML 'COOL 2007' closed
27
28 ##### 0.33 [s] ### end of XML read
29
30 0: 57 FRM1C02 [laser;ion;bunching;electron;storage-ring;]
31 1: 58 FRM1C03 [electron;ion;target;cryogenics;cathode;]
32 2: 56 FRM1I01 [laser;ion;proton;induction;storage-ring;]
33 3: 59 FRM2C04 [ion;antiproton;proton;electron;space-charge;]
34 <...>
35 49: 30 WEM2C06 [ion;electron;simulation;space-charge;synchrotron;]
36 50: 29 WEM2I05 [simulation;pick-up;emittance;kicker;ion;]
37 51: 10 MOA2I06 [electron;antiproton;emittance;extraction;injection;]
38 ##### 1.68 [s] ### end of keyword generation
39 ##### 2.55 [s] ### end of session generation
40 ##### 5.14 [s] ### end of author generation
41 ##### 5.27 [s] ### end of institute generation
42 ##### 5.54 [s] ### end of class generation
43
44 elapsed time: 5.55 [s]

```

Please ignore lines 1...3 which output redefined functions. Line 5 signals that the »conference.config« is found and processing will continue. Line 7 tells that the XML file which will be read is »spms.xml«. Line 8 gives the dimensions of the logo to be used in the banner. Line 10 and 26 shows that reading the XML file has begun/ended. In line 10 you find the type of conference the XML comes from. This file has been produced by »SPMS« (and not by »InDiCo« the second form of XML JPSP understands). The number of chair persons is mentioned because InDiCo distinguishes between 'Unchaired sessions' and several session chairs. All sessions found in the XML file are numbered and their name is given at the end of reading the appropriate session (lines 11–16, 19, 22–24). Lines 17–18 show papercode ids under which files have been uploaded which do not agree to the naming scheme of paper source files. This can most likely happen when Javascript is disabled during file upload and the necessary checks on file names can not be made.

After each stage of processing an elapsed time is given (lines 28, 38–42). The total run time is given as the last output line of the script run (line 44). Lines 30–37 show you which keywords for each paper have been found and will be used in the generation of hidden fields.

The lines 20–21 show that an author is referenced whose affiliation and/or profile entry is still pending, that means that a request has been submitted, but the profile is still not complete. So expect to see entries on the web pages and in the abstract booklet like:

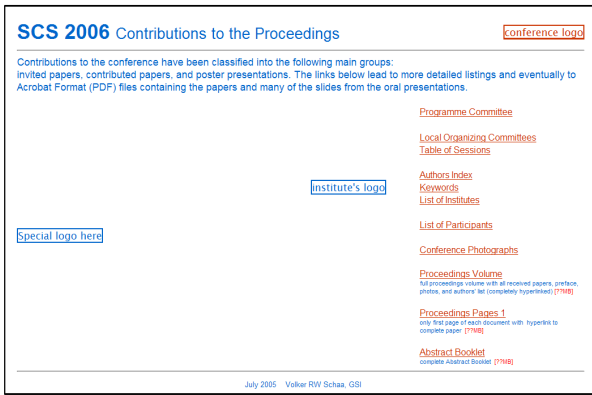
**TUPCH066 Design and Fabrication of Ion Beam Sputtering System with 10 KEV Energy**

- **M.M. Larijani**  
New Affiliation Request Pending, -TBS-

An ion beam sputtering coaters with a Kaufman ion source for depositing thin and thick films has been constructed and successfully operated. The cylindrical vacuum chamber is 66 cm length with an inner diameter 52 cm. The vacuum

Figure 8: Affiliation Request Pending for Mr. Larijani

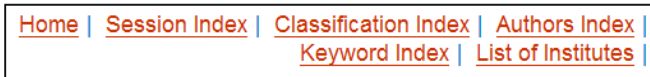
After the output in line 44 the script run is complete and you should have a complete web site. You can test the generated site by launching »INDEXLOC.HTM« in the root directory.



After each run of »spmsbatch« a default »INDEXLOC.HTM« is generated in the root directory which should ease the launch of the generated web site. This file functions as an »INDEX.HTM« skeleton and has all necessary links prepared. After running »spmsbatch« you should copy »INDEXLOC.HTM« to »INDEX.HTM« and make all adaption in the *real* thing. Model for this template were the EPAC web presentations in 2004 and 2002.<sup>7</sup> You should not make any changes to the script »spmsbatch.pl« to achieve the wanted look of the generated »INDEXLOC.HTM«.

The necessary html source attributes for the conference and institute's logos are there and have to be filled (the conference logo is preset from the config file, only width and height have to be adjusted: ``). The positions for logos are shown in the template to the left (see rectangles with logo designation). Links for committees (»Programme« and »Local Organizing«), »Proceedings Volume« (full proceedings volume with all received papers, preface, photos, and authors' list and completely hyperlinked), »Proceedings Pages 1« (contains only the first page of each document with hyperlinks to the complete paper) and »Abstract Booklet« are configured. After customizing »INDEXLOC.HTM« you should rename it to »INDEX.HTM«, otherwise the next script run will overwrite your changes.

Selecting one of the links to »Session Index«, »Authors Index«, »Keywords« or »List of Institutes« will bring you to the banner page (See figure 6 on page 17) which will show the web pages generated from the information in the XML file.



The figure to the left shows the link section of the banner page with all links to the generated pages. For SPMS »Session Index« works only, if sessions have

already been assigned in the SPMS database. So be warned if you use SPMS and run the script and generate the web pages in an early stage of the conferences (i.e. before the uploaded abstracts are assigned to specific sessions) this link will lead you to a (mostly) empty page. The same is true for the link to »Keyword Index« in a stage before any paper have been run through the process of keyword generation (↔ section 3.7 on page 27). The links which surely work from the earliest stage of a conference are the »Authors Index« and »List of Institutes«.

Running the script for a SPMS conference before any `paper_codes` have been assigned, the `abstract_id` will be used instead. This `abstract_id` is named »Contribution ID« in the SPMS search panel.

The figure to the right shows a typical web page generated by the script »spmsbatch.pl«. In this case a PDF file with transparencies (slides) had been uploaded to SPMS or is tagged in InDiCo, and because it is present on the »slides\_directory« (./talks), it gets a link to the file location signified by the slides icon (📄).


Paper	Title
FRBAU01	<b>Science at Single Pass X-Ray Free Electron Lasers</b> <ul style="list-style-type: none"> <li>• <b>J. R. Schneider</b> DESY, Hamburg</li> </ul> <p>Based on recent experience gained at the Free Electron Laser in Hamburg (FLASH) operating in the spectral range of the VUV, the first free electron laser user facility world wide, the requirements for successful experiments will be discussed. This includes the interplay between experimentalists on one and accelerator physicists and operators on the other hand, the need for various diagnostic tools, samples and sample environment, as well as the need for new approaches for data analysis</p> <p>📄 <a href="#">Slides</a></p> <p>🔊 <a href="#">Talk</a></p>

Figure 9: Paper with abstract and links to transparencies and audio recording

A second icon indicates the presence of an audio recording of the talk (audio file 🔊), the file is placed in the »audio\_directory« (./AUDIO). The same happens for InDiCo conferences if a file is tagged in the appropriate way.

<sup>7</sup>See <http://accelconf.web.cern.ch/accelconf/e04/default.htm> for the EPAC 2004 JACoW site




For workshops and small conferences another type of document has been added to the list of linked documents: PDF of posters. Poster PDF files have to be named »<paper\_code>\_poster.PDF« and must reside in the »poster\_directory«. During the run of script »spmsbatch.pl« a check is made for the existence of poster PDF files. If a file is found, a link is created and the poster icon () is shown for the paper (see figure to the right).

THAP14 Pick-Up Electrode System for the CR Stochastic Cooling System

- F. Nolden, C. Peschke  
GSI, Darmstadt

The collector ring (CR) of the FAIR project will include a fast stochastic cooling system for exotic nuclei with a  $\beta$  of 0.83 and antiprotons with a  $\beta$  of 0.97. To reach a good signal to noise ratio of the pick-up even with a low number of particles, a cryogenic movable pick-up electrode system based on slotlines is under development. The sensitivity and noise properties of an electrode array has been calculated using field-simulation and equivalent circuits. For three-dimensional field measurements, an E-near-field probe moved by a computer controlled mapper has been used.

 [Poster](#)

The paper code (»FRBAU01«) shows no link to a paper PDF file (see figure 9). This can be achieved by the following: The config parameter »paper\_not\_received\_link« is used to determine how papercodes are treated when no files have been uploaded by the author. Normally for these papercodes a PDF file will be generated which consists of title, list of authors, abstract, and the text defined for the »paper\_not\_received\_text« parameter. An example of the corresponding file for this papercode is shown to the right.

If the parameter »paper\_not\_received\_link« is »0« as it was in the above used setting no files are produced and no link from the »paper\_code« could be generated.

Proceedings of FEL2006, Berlin, Germany FRBAU01

**SCIENCE AT SINGLE PASS X-RAY FREE ELECTRON LASERS**

J.R. Schneider, DESY, Hamburg

**Abstract**

Based on recent experience gained at the Free Electron Laser in Hamburg (FLASH) operating in the spectral range of the VUV, the first free electron laser user facility world wide, the requirements for successful experiments will be discussed. This includes the interplay between experimentalists on one and accelerator physicists and operators on the other hand, the need for various diagnostic tools, sample and sample environment, as well as the need for new approaches for data analysis

PAPER NOT YET  
RECEIVED

New Science at FELs 1

### 3.5 Downloading PDF Files: Command File pdfwget.bat

The command file pdfwget.bat can be used to download all PDF files which make up the conference files: the raw papers after 'Final QA', the slides and posters. This batch file is written during each run of spmsbatch.pl and gets its information about files out of the XML data from SPMS or InDiCo. Therefore only files known in the conference systems and correctly tagged (»<paper\_code>.pdf«, »<paper\_code>.talk.pdf« or »<paper\_code>.poster.pdf«) can be downloaded. The files will be place automatically in the correct directories defined by »conference.config« (papers into »raw\_paper\_directory«, transparencies into »slides\_directory« and posters in »posters\_directory«).

The following lines from pdfwget.bat show the download instruction using wget and the DOS command to move the files from the actual directory into the one defined in »conference.config« automatically overwriting old files (/Y):

```
wget -O "thap21.pdf" "http://jacow.gsi.de/cgi-bin/zipdownload.pl/cool07?paper_id=THAP21&wanted_file=THAP21.PDF"
move /Y "thap21.pdf" "./papers-final/thap21.pdf"
wget -O "thap21_poster.pdf" "http://jacow.gsi.de/cgi-bin/zipdownload.pl/cool07?paper_id=THAP21&wanted_file=THAP21_poster.pdf"
move /Y "thap21_poster.pdf" "./posters/thap21_poster.pdf"
wget -O "thap22.pdf" "http://jacow.gsi.de/cgi-bin/zipdownload.pl/cool07?paper_id=THAP22&wanted_file=THAP22.PDF"
move /Y "thap22.pdf" "./papers-final/thap22.pdf"
wget -O "tha2i01_talk.pdf" "http://jacow.gsi.de/cgi-bin/zipdownload.pl/cool07?paper_id=THA2I01&wanted_file=THA2I01_talk.pdf"
move /Y "tha2i01_talk.pdf" "./talks/tha2i01_talk.pdf"
```

### 3.6 Packaging PDF Files: Command File gen\_texpdf.bat

The command file `gen_texpdf.bat` is used to generate the final PDF files for publication on the JACoW web site. After running `gen_texpdf.bat` the raw PDF files have page numbers, header and footer lines, and filled hidden fields (title, author, subject, and keywords).

The command file `gen_texpdf.bat` in the directory `»./papers«` is automatically generated by a run of `spmsbatch.pl`. Apart from the introduction remarks in line 1..4, for each paper in the XML file a sequence of commands (lines 5..15 or 16..23) is generated. The first three lines are just comments stating the paper which is going to be processed. Then a `pdfLATEX` run is processing `»<paper_code>.tex«` (which has also been generated by `spmsbatch.pl`). The `TEX` file is then processed by `thumbpdf.exe` (line 9) to generate thumbnails which are included into the PDF file by the next run of `pdfLATEX` (line 10). If the thumbnails are already present from a previous run, command lines for `thumbpdf` and a second `pdfLATEX` run are not generated by the script (line 18).

Please be aware that the thumbnail produced by a run of `thumbpdf.exe` is used as long as it is found on the directory. It will not be reproduced if the underlying PDF file changes due to the automatic skipping of this step in the command procedure. If you want to reprocess the thumbnail you have to delete the file `»<paper_code>.tpt«` before running `spmsbatch.pl` again.

```

1  REM Command file to generate final pdfs from raw pdfs
2  REM (raw i.e. without Title, Author, Keyword fields)
3  REM ----- v 9.1 - 28. Aug 2008 vrwSchaa
4  REM                               mailto:v.r.w.schaa@gsi.de
5  echo.-----
6  echo generating "MOM1I01.pdf"
7  echo.-----
8  pdfflatex mom1i01.tex
9  thumbpdf mom1i01.tex
10 pdfflatex mom1i01.tex
11 REM del mom1i01.tex
12 REM del mom1i01.log
13 del mom1i01.aux
14 del mom1i01.out
15 echo.-----
16 echo generating "MOM1I02.pdf"
17 echo.-----
18 pdfflatex mom1i02.tex
19 REM del mom1i02.tex
20 REM del mom1i02.log
21 del mom1i02.aux
22 ...

```

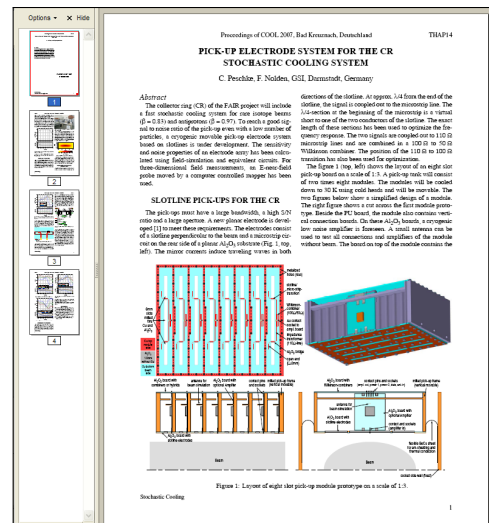


Figure 10: Problem with old thumbnail for page 1 displayed in final paper

Purpose	Packaging the papers and providing thumbnails for PDF backwards compatibility
Directory	<code>\$paper_directory</code> ↔ <code>./papers</code>
needs	<code>pdfflatex.exe</code> <code>thumbpdf.exe</code> <code>pdfopt.exe</code>
reads	<code>&lt;paper_code&gt;.tpt</code>
writes	<code>&lt;paper_code&gt;.pdf</code> <code>&lt;paper_code&gt;.tpt</code> <code>proceedings.pdf</code> <code>proceedings-pages1.pdf</code>

### 3.7 Generate Keywords: Script `scan-keywords.pl`

The Perl script »`scan-keywords.pl`« is used to generate a list of the five topmost used keywords of each paper. The papers are checked for JACoW specific keywords, this list is available on the [JACoW](#) web site. You may want to add additional keywords to the list (e.g. PAC05 added »`SNS`« and »`Spallation Neutron Source`« to the master list). Chapter 6.3 describes how to enter additional keywords with the appropriate regular expression syntax into the master keyword list.

The way »`scan-keywords.pl`« operates:

- 1 it reads the keyword file »`keywords.list`« and stores the keywords and their regular expressions in an internal structure,
- 2 it searches the current directory for pdf files (`<paper_code>.pdf`),
- 3 it checks whether there is an already converted text file for the found pdf file (`<paper_code>.txt`),
- 4 if **no**, it converts the pdf file into a text file (`<paper_code>.txt`) using »`pdftotext`«,
- 5 it scans the text files and compares the keyword list to the file's contents,
- 6 it writes the file (`keyword-count.txt`) with entries for the five topmost used keywords, like

```
<paper_code>=keyword1;keyword2;keyword3;keyword4;keyword5;
```

which will read

```
POM031=single-bunch;acceleration;beam-losses;linear-collider;simulation;
```

After running »`scan-keywords.pl`« you should check the new generated »`keyword-count.txt`« file for lines like »`<paper_code>=`«.

```
1 MOA1C02=target;antiproton;emittance;proton;pick-up;
2 MOA1C03=pick-up;accumulation;kicker;antiproton;injection;
3 MOA1I01=
4 MOA2C05=electron;target;antiproton;emittance;luminosity;
5 MOA2I04=
6 MOA2I06=electron;antiproton;emittance;extraction;injection;
```

If you encounter such an entry (like in paper codes MOA1I01 and MOA2I04) you should check »`<paper_code>.txt`« (in the same directory) to see if it contains readable ASCII text.

Each »`<paper code>.pdf`« is translated to ASCII which is written to a file named »`<paper_code>.txt`«. Sometimes (mostly with Macintosh papers and papers with special character set encodings) you will only see garbage there. Try to produce a »`<paper_code>.txt`« file manually with the ASCII contents of the paper, and rerun »`scan-keywords.pl`«. It then should fill the above mentioned line with the correct keywords. Sometimes you may have to cut and paste from the source file (Word, T<sub>E</sub>X, OpenOffice) into »`<paper code>.txt`« to get real ASCII as even cut and paste from AcrobatReader will not work.

Purpose	This script identifies the five topmost used keywords of a given list in each paper.
Directory	<code>\$raw_paper_directory</code> ↔ <code>./papers-final</code>
needs	<code>pdftotext.exe</code>
reads	<code>keywords.list</code> <code>&lt;paper_code&gt;.pdf</code> <code>&lt;paper_code&gt;.txt</code>
writes	<code>keyword-count.txt</code>
output is used by	<code>spmsbatch.pl</code>

### 3.8 Table of Contents and Page numbering: Script generate\_toc.pl

The SPMS system is a fully contained setup that decides by configuration in which sequence papers are being numbered. The »Table of Contents« or »TOC Values« are determined by configured sequence and the page number of each paper entered during the »Final QA« phase. The »TOC Values« and the number of pages are communicated to the scripts by XML properties.

Due to the conceptual differences between InDiCo and SPMS, InDiCo has in contrast to SPMS no means to ensure a consistent numbering of documents. To take care for the correct generation of »TOC Values« one has to follow different routes:

- ❶ For SPMS use the build-in function »Generate TOC Values« (↔ section 3.8.1).
- ❷ For InDiCo use the provided script »generate\_toc.pl« (↔ section 3.8.2).

#### 3.8.1 SPMS Generate TOC Values

The Administrator Pages of the SPMS web interface (you have to log in with administrator privileges) provide an option to generate table of contents (TOC) entries for all papers. This is necessary to generate correct page numbers for the PDF files, web pages, and proceedings.

You can find this option in the »Scientific Program Administration«:

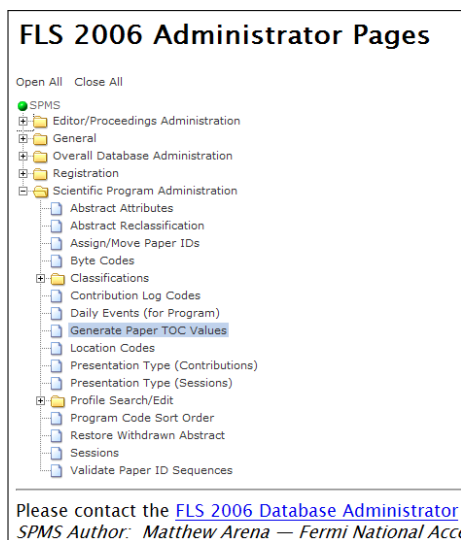


Figure 11: Generate TOC Values

TOC Numbers Generated	
Paper ID	TOC #
ITMM01	1
ITMM02	6
ITMM03	7
ITMM04	12
CTMM01	17
CTMM02	18
POM001	21
POM002	24
POM003	27
POM004	30
POM005	33
POM006	36
POM007	39
POM008	42
POM009	45
POM010	48
POM011	51

Figure 12: TOC Numbers Generated

#### 3.8.2 InDiCo Generate TOC Values

InDiCo has in contrast to SPMS no means to ensure a consistent numbering of documents. To provide means for a consistent numbering of documents and web page references the script »generate\_toc.pl« has been developed.

This script works as follows:

- ❶ It reads the InDiCo XML file and locates documents (PDF) which belong to the set of valid documents.
- ❷ Opens the PDF document and determines the page count.
- ❸ Generates a new XML file with correct »<pages>xxx</pages>« and »<TOC>xxx</TOC>« values. In addition the »publishable« flag will be set to »yes« and the »dot« status to »green«.

The final XML file should behave identically to one which was generated by SPMS. The workflow for InDiCo is the same as for SPSM: run `spmsbatch` (↔ section 3.4).

# 4 Production of Web Site, Abstract Booklet, Proceedings Volume, CD-ROM

## 4.1 Production Run for the Web Site

The whole process of creating a web site update is as follows:

- 1 Download the conference XML file from SPMS or InDiCo ( $\hookrightarrow$  section 3.3), make sure for SPMS conferences that after »Final QA« paper TOC values have been generated ( $\hookrightarrow$  section 3.8.1), (for InDiCo conferences see list item 3)
- 2 Use the batch file »pdfwget.bat« to download the PDF files of the edited papers, the transparencies and posters from SPMS or InDiCo. The files will be placed automatically in the correct directory (papers into »raw\_paper\_directory«, transparencies into »slides\_directory« and posters in »posters\_directory«) ( $\hookrightarrow$  section 3.5)
- 3 For InDiCo conferences generate now page count and TOC values using the script »generate\_toc.pl« ( $\hookrightarrow$  section 3.8.2)
- 4 Run the script »scan-keywords.pl« to generate the list of used keywords ( $\hookrightarrow$  section 3.7)
- 5 Copy all audio files from wherever they have been stored to ./audio. A link is only given, if there has been a slides files uploaded to SPMS.<sup>8</sup> Make sure that the name for the audio file is »<paper\_code>.mp3«).
- 6 Run the script »spsmbatch.pl« to generate web pages, the T<sub>E</sub>X files for the proceedings volume and to package the papers from »./papers-final« ( $\hookrightarrow$  section 3.4)
- 7 Run the command file »gen\_texpdf.bat« in »./papers« to package the raw files (adding page numbers, header and footer lines, fill hidden fields with keywords, etc.) ( $\hookrightarrow$  section 3.6)
- 8 Rerun the script »spsmbatch.pl« again to make sure that all links are generated.
- 9 Copy all files ./papers/\*.pdf, ./html/\*.\*, ./talks/\*.pdf, ./images/\*.\*, ./audio/\*.mp3 and ./posters/\*.pdf if used, and the final »index.htm« to the web server directories
- 10 Run »Xenu« ( $\hookrightarrow$  section 5.3) to check the directory structure for broken links and orphan files.

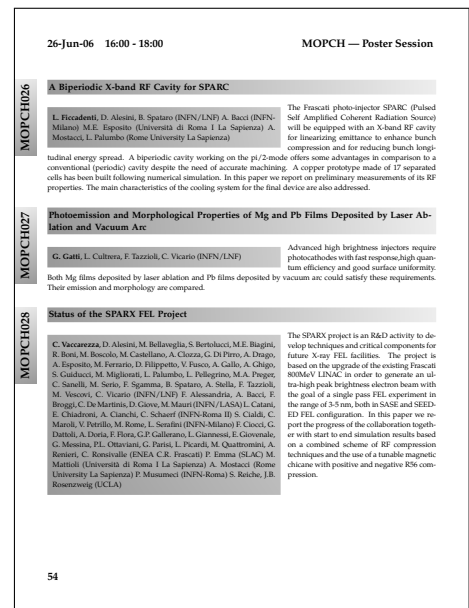
## 4.2 Production of an Abstract Booklet

A run of »spsmbatch.pl« will produce the content for an abstract booklet if this option is selected in the config file<sup>9</sup>. The resultant file is placed in the »paper\_directory« with the name »ctxt-info.tex« and included by »abstract-base.tex«. This file could not be compiled with the standard »pdfT<sub>E</sub>X« because the generated source uses the ConT<sub>E</sub>Xt T<sub>E</sub>X-engine to provide automatically generated bleeding boxes around fields for authors, title and papercode (see an example page from the abstract booklet for the EPAC'06 conference to the right).

If you have installed Ruby ( $\hookrightarrow$  section 2.6) try to run it in a command prompt window:

```
D:\SCS2009\papers>ruby --version
ruby 1.8.6 (2007-09-24 patchlevel 111) [i386-mswin32]
```

When you see a response like that you can start with the standard command sequence as follows after having set up the environment for ConT<sub>E</sub>Xt:



<sup>8</sup>I have absolute no idea what happens with InDiCo.

<sup>9</sup>only if the ConT<sub>E</sub>Xt generating switch (context\_switch) in the configuration file is set to »1« ( $\hookrightarrow$  section 3.2)

```
D:\SCS2009\papers>context --autopdf abstract-base.tex
```

»context« is the base command for ConT<sub>E</sub>Xt; see »texexec --help« what it can do for you. »--autopdf« will tell Acrobat Reader to close the old PDF file and reopen the new one after compiling.

At the moment of this writing (November 17, 2008) the ConT<sub>E</sub>Xt setup in MiK<sub>T</sub>E<sub>X</sub> is corrupted in the font setup and doesn't work for the needed Palatino. To get a working one you have to download a minimal setup from the ConT<sub>E</sub>Xt site and install it separately from and in addition to MiK<sub>T</sub>E<sub>X</sub> as described in the following paragraph.

You can download a minimal setup for ConT<sub>E</sub>Xt from the »New Minimals initial configuration« on the "ConT<sub>E</sub>Xt Garden web site". For Windows there is just one package to download: [minimal ConT<sub>E</sub>Xt distribution](#) with 3.1 MB. Unzip this ZIP file in a new directory and run first-setup.bat.

```
C:>unzip context-setup-mswin.zip
Archive:  context-setup-mswin.zip
Archive:  context-setup-mswin.zip
  creating: context/
  inflating: context/first-setup.bat
  creating: context/bin/
  inflating: context/bin/cygwin1.dll
  inflating: context/bin/rsync.exe
  inflating: context/bin/luatex.dll
  inflating: context/bin/cygiconv-2.dll
  inflating: context/bin/mtx-update.lua
  inflating: context/bin/mtxrun.cmd
  inflating: context/bin/texlua.exe
  inflating: context/bin/mtxrun.lua
  inflating: context/bin/kpathsea357.dll
```

#### New Minimals initial configuration

On unix (linux, mac, freebsd, sun, ...) run:

```
mkdir context && cd context
rsync -ptv rsync://contextgarden.net/minimals/setup/first-setup.sh .
./first-setup.sh
```

On windows you can download [context-setup-mswin.zip](#), unzip it and run first-setup.bat.

Name	Last modified	Size	Description
Parent Directory		-	
context-installer/	02-Jan-2008 14:26	-	
context-setup-mswin.zip	10-Nov-2008 23:04	3.1M	
first-setup.sh	10-Nov-2008 19:19	1.6K	
freebsd/	10-Nov-2008 19:19	-	
linux-64/	10-Nov-2008 19:19	-	
linux-ppc/	10-Nov-2008 19:19	-	
linux/	10-Nov-2008 19:19	-	
mswin/	04-Jun-2008 16:21	-	
osx-intel/	10-Nov-2008 19:19	-	
osx-ppc/	10-Nov-2008 19:19	-	
osx-universal/	10-Nov-2008 19:19	-	
sun/	10-Nov-2008 19:19	-	

ConT<sub>E</sub>Xt comes with a (first) setup command procedure (first-setup.bat) which you have to call the first time you download and install ConT<sub>E</sub>Xt.

```
C:> cd context
C:context> first-setup
```

You will then see

```
C:\context>first-setup.bat
receiving file list ... done
./
kpathsea357.dll
luatex.dll
mtx-update.lua
mtxrun.cmd
mtxrun.lua
texlua.exe

sent 15008 bytes received 10285 bytes 3891.23 bytes/sec
total size is 3974966 speedup is 157.16
MtxRun | variable SELFAUTOLOC set to C:/context/bin
MtxRun | variable SELFAUTODIR set to C:/context
MtxRun | variable SELFAUTOPARENT set to C:/
MtxRun | variable TEXMFCNF set to C:\context\tex\texmf{-local,-context,}/web2c
MtxRun | loading configuration for C:/context/tex/texmf/web2c from C:/context/t...>
8b88994bdd02baa17501789699
MtxRun | locating list of C:/context/tex/texmf-project
MtxRun | locating list of C:/context/tex/texmf-fonts
MtxRun | locating list of C:/context/tex/texmf-local
MtxRun | locating list of C:/context/tex/texmf-mswin
MtxRun | locating list of C:/context/tex/texmf-context
```

```

MtxRun | locating list of C:/context/tex/texmf-extra
MtxRun | locating list of C:/context/tex/texmf
<...several thousand lines...>
TeXExec |
TeXExec | tex engine path: C:/context/tex/texmf-mswin/web2c/pdftex
TeXExec | mps engine path: C:/context/tex/texmf-mswin/web2c
TeXExec |
TeXExec | tex: 13/11/2008 01:25:40 > C:/context/tex/texmf-mswin/web2c/pdftex/cont-nl.fmt (7753142)
TeXExec | tex: 13/11/2008 01:25:46 > C:/context/tex/texmf-mswin/web2c/pdftex/cont-en.fmt (7622323)
TeXExec | mps: 13/11/2008 01:25:46 > C:/context/tex/texmf-mswin/web2c/metafun.mem (482988)
TeXExec |
TeXExec | runtime: 15.011
make | done
state | saved

```

When you want to use context, you need to initialize the tree with:

```
C:\context\tex\setuptex.bat C:\context\tex
```

You can associate this command with a shortcut to the cmd prompt.

Now you have a working Con<sub>T</sub>E<sub>X</sub>t setup which has to be initialized with »setuptex« each time you open a new command prompt window. You can now initialize Con<sub>T</sub>E<sub>X</sub>t and use the command sequence to compile the abstract booklet:

```

E:\EPAC2006\papers>c:\Context\tex\setuptex c:\Context\tex
E:\EPAC2006\papers>context --autopdf abstract-base.tex

```

If you experience a clash of papercode and paper title in the table of contents you should search for the following code segment in the file D:\SCS2009\papers\abstract-base.tex:

```

\def\MyChapterCommand#1#2#3%
  {\testpage[5]
   \subject{#1}{#2}
   \placelist[section][width=2cm]} %change if papercode is too long

```

Here you have to change the width from 2cm to 2.4cm to give room between papercode and paper title.

## Contents

MOMPMP — Plenary Session 1

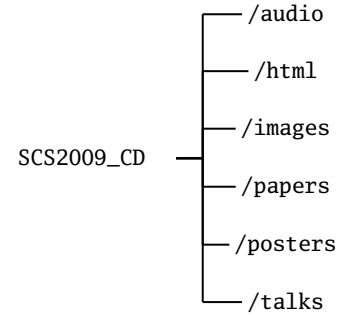
MOMPMP01Computational Beam Dynamics for SN  
MOMPMP02Computational Needs for ILC

### 4.3 Production of a CD-ROM Image

If you have already produced a production run for the web site, the process of producing a CD-ROM image is as follows:

- ❶ Create a basic directory structure like the layout in the figure to the right
- ❷ Copy the final »f« to the »SCS2009\_CD/« root directory
- ❸ Copy all packaged PDF files from the production directory to the corresponding directory of the CD-ROM  
(SCS2009/papers/\*.pdf  $\rightsquigarrow$  SCS2009\_CD/papers/)
- ❹ Copy all talk PDFs to the corresponding directory:  
(SCS2009/talks/\*.pdf  $\rightsquigarrow$  SCS2009\_CD/talks/)
- ❺ If existing copy all poster PDFs to the corresponding directory  
(SCS2009/posters/\*.pdf  $\rightsquigarrow$  SCS2009\_CD/posters/)
- ❻ If you have audio file for the talks copy all MP3s to the corresponding directory (SCS2009/audio/\*.mp3  $\rightsquigarrow$  SCS2009\_CD/audio/)
- ❼ Copy all web files (»htm«, »css«) and logos, icons, etc. (»gif/png/jpg«) to the corresponding directory of the CD-ROM  
(SCS2009/images/[\* .gif, \* .png, \* .jpg]  $\rightsquigarrow$  SCS2009\_CD/images/)  
(SCS2009/htm/[\* .htm, \* .css]  $\rightsquigarrow$  SCS2009\_CD/htm/)
- ❽ You might want to add special directories later for placing conference pictures and additional material which will be linked through the final »index.htm«.
- ❾ Run »Xenu« ( $\leftrightarrow$  section 5.3) to check the directory structure for broken links and orphan files.

The basic directory structure for a CD-ROM image:





## 4.4 Special Characters in Abstracts

The script »spmsbatch.pl« is equipped to recognize an expanding set of characters and notations. It is able to transport these correctly into the abstract booklet, the proceedings volume, and the web site. Abstract authors can use these notations and special characters to structure the text, write small math formulas and use the correct spelling for accented words.

### 4.4.1 Set of accented characters

The characters in this table can be entered as codes in ISO-8859-1 (without Euro currency character), ISO-8859-15 (with Euro), UTF-8 (these are the characters in column »In«) or as HTML entities (column »HTML«). The character shown in the browser window will look like the character in column »Out« (depending on chosen font).

In	HTML	Out	In	HTML	Out	In	HTML	Out	In	HTML	Out	In	HTML	Out
Â	&Acirc;	Â	ô	&Ocirc;	Ô	û	&Ucirc;	Û	Ê	&Ecirc;	Ê	Î	&Icirc;	Î
â	&acirc;	â	ô	&ocirc;	ô	û	&ucirc;	û	ê	&ecirc;	ê	î	&icirc;	î
Á	&Aacute;	Á	ó	&Oacute;	Ó	ú	&Uacute;	Ú	É	&Eacute;	É	Í	&Iacute;	Í
á	&aacute;	á	ó	&oacute;	ó	ú	&uacute;	ú	é	&eacute;	é	í	&iacute;	í
À	&Agrave;	À	ò	&Ograve;	Ò	ù	&Ugrave;	Ù	È	&Egrave;	È	Ì	&Igrave;	Ì
à	&agrave;	à	ò	&ograve;	ò	ù	&ugrave;	ù	è	&egrave;	è	ì	&igrave;	ì
Ä	&Auml;	Ä	ö	&Ouml;	Ö	ü	&Uuml;	Ü	Ë	&Euml;	Ë	Ï	&Iuml;	Ï
ä	&auml;	ä	ö	&ouml;	ö	ü	&uuml;	ü	ë	&euml;	ë	ï	&iuml;	ï
Ã	&Atilde;	Ã	õ	&Otilde;	Õ	ñ	&Ntilde;	Ñ	Ð	&ETH;	Ð			
ã	&atilde;	ã	õ	&otilde;	õ	ñ	&ntilde;	ñ	ð	&eth;	ð			
Å	&Aring;	Å	Ø	&Oslash;	Ø	ß	&szlig;	ß	Þ	&THORN;	Þ			
å	&aring;	å	ø	&oslash;	ø	ÿ	&Yacute;	ÿ	þ	&thorn;	þ			
Æ	&AElig;	Æ				ý	&yacute;	ý	Ç	&Ccedil;	Ç			
æ	&aelig;	æ				ÿ	&yuml;	ÿ	ç	&ccedil;	ç			

### 4.4.2 Set of recognized math characters (L<sup>A</sup>T<sub>E</sub>X mode)

The characters in this table can be entered as T<sub>E</sub>X/L<sup>A</sup>T<sub>E</sub>X codes (these are the characters in column »T<sub>E</sub>X«) or as HTML entities (column »HTML«). The character shown in the browser window will look like the character in column »Out« (depending on chosen font).

T <sub>E</sub> X	HTML	Out	T <sub>E</sub> X	HTML	Out	T <sub>E</sub> X	HTML	Out	T <sub>E</sub> X	HTML	Out
\alpha	&alpha;	α	\beta	&beta;	β	\gamma	&gamma;	γ	\Gamma	&Gamma;	Γ
\delta	&delta;	δ	\Delta	&Delta;	Δ	\epsilon	&epsilon;	ε	\zeta	&zeta;	ζ
\eta	&eta;	η	\theta	&theta;	θ	\Theta	&Theta;	Θ	\iota	&iota;	ι
\kappa	&kappa;	κ	\lambda	&lambda;	λ	\Lambda	&Lambda;	Λ	\mu	&mu;	μ
\micro	--	μ	\nu	&nu;	ν	\xi	&xi;	ξ	\Xi	&Xi;	Ξ
\pi	&pi;	π	\Pi	&Pi;	Π	<pi>		π	\rho	&rho;	ρ
\sigma	&sigma;	σ	\Sigma	&Sigma;	Σ	\varsigma	&sigmaf;	ς	\tau	&tau;	τ
\upsilon	&upsilon;	υ	\phi	&phi;	φ	\Phi	&Phi;	Φ	\chi	&chi;	χ
\psi	&psi;	ψ	\Psi	&Psi;	Ψ	\omega	&omega;	ω	\Omega	&Omega;	Ω

### 4.4.3 Math characters available in L<sup>A</sup>T<sub>E</sub>X notation

In	Out	In	Out	In	Out	In	Out	In	Out
<code>\deg</code>	°	<code>\sum</code>	∑	<code>\prod</code>	∏	<code>\int</code>	∫	<code>\oint</code>	∮
<code>\bigcap</code>	∩	<code>\bigcup</code>	∪	<code>\bigvee</code>	∨	<code>\bigwedge</code>	∧	<code>\bigotimes</code>	⊗
<code>\bigoplus</code>	⊕	<code>\hbar</code>	ℏ	<code>\imath</code>	ı	<code>\jmath</code>	Ƶ	<code>\ell</code>	ℓ
<code>\wp</code>	℘	<code>\Re</code>	ℜ	<code>\Im</code>	ℑ	<code>\prime</code>	′	<code>\emptyset</code>	∅
<code>\angle</code>	∠	<code>\infty</code>	∞	<code>\partial</code>	∂	<code>\nabla</code>	∇	<code>\forall</code>	∀
<code>\exists</code>	∃	<code>\neg</code>	¬	<code>\surd</code>	√	<code>\top</code>	⊤	<code>\bot</code>	⊥
<code>\backslash</code>	\	<code>\clubsuit</code>	♣	<code>\diamondsuit</code>	♢	<code>\heartsuit</code>	♥	<code>\spadesuit</code>	♠
<code>\dag</code>	†	<code>\ddag</code>	‡	<code>\S</code>	§	<code>\P</code>	¶	<code>\copyright</code>	©
<code>\pounds</code>	£	<code>\diamond</code>	◇	<code>\Box</code>	□	<code>\cdot</code>	·	<code>\ldots</code>	...
<code>\cdots</code>	...	<code>\vdots</code>	⋮	<code>\ddots</code>	⋱	<code>\lfloor</code>	⌊	<code>\lceil</code>	⌈
<code>\langle</code>	⟨	<code>\rfloor</code>	⌋	<code>\rceil</code>	⌉	<code>\rangle</code>	⟩	<code>\uparrow</code>	↑
<code>\downarrow</code>	↓	<code>\Uparrow</code>	↑	<code>\Downarrow</code>	↓	<code>\leq</code>	≤	<code>\geq</code>	≥
<code>\ll</code>	≪	<code>\gg</code>	≫	<code>\subset</code>	⊂	<code>\supset</code>	⊃	<code>\subseteq</code>	⊆
<code>\supseteq</code>	⊇	<code>\in</code>	∈	<code>\ni</code>	∋	<code>\equiv</code>	≡	<code>\sim</code>	~
<code>\perp</code>	⊥	<code>\simeq</code>	≈	<code>\parallel</code>	∥	<code>\approx</code>	≈	<code>\cong</code>	≅
<code>\neq</code>	≠	<code>\propto</code>	∝	<code>\times</code>	×	<code>\times</code>	×	<code>\div</code>	÷
<code>\ast</code>	*	<code>\star</code>	★	<code>\circ</code>	○	<code>\bullet</code>	•	<code>\cap</code>	∩
<code>\cup</code>	∪	<code>\vee</code>	∨	<code>\wedge</code>	∧	<code>\diamond</code>	◇	<code>\oplus</code>	⊕
<code>\otimes</code>	⊗	<code>\oslash</code>	⊘	<code>\dagger</code>	†	<code>\ddagger</code>	‡	<code>\longmapsto</code>	↦
<code>\Longrightarrow</code>	⇒	<code>\Longleftarrow</code>	⇐	<code>\leftarrow</code>	←	<code>\Leftarrow</code>	⇐	<code>\rightarrow</code>	→
<code>\Rightarrow</code>	⇒	<code>\leftrightharrow</code>	↔	<code>\Leftrightarrow</code>	⇔	<code>\mapsto</code>	↦	<code>\lesssim</code>	≲
<code>\hbar</code>	ℏ								

A web page showing Greek and Math characters:

α	β	γ	δ	ε	ε	ζ	η	θ	ϑ	ι	κ	λ	μ	μ	μ	ν	ξ
π	π	ω	ρ	ρ	σ	σ	τ	υ	φ	φ	χ	ψ	ω	Γ	Δ	Θ	
Λ	Ξ	Π	Σ	Υ	Φ	Ψ	Ω	e <sup>+</sup> e <sup>-</sup>	e <sup>-</sup>	e <sup>+</sup>	H <sup>+</sup>	H <sup>2+</sup>	H <sup>-</sup>	D <sup>+</sup>			
±	±	ababc	ababc	√(123)	ababc	ab <sup>123</sup>	-a:	10 <sup>123</sup>	-b:	10 <sup>123</sup>	-c:						
10 <sup>12</sup>	-d:	10 <sup>-123</sup>	-f:	10 <sup>-123</sup>	-g:	abcdef	-h:	12.3·10 <sup>-12</sup>	-i:	10 <sup>-123</sup>	-j:	12.3·10 <sup>12</sup>					
k:	A <sup>1+</sup>	AB <sup>12+</sup>	ο	Σ	Π	f	(f)	∩	∪	∨	∧	⊗	⊕	(h/2p)			
ι	j	/	ρ	ℜ	ℑ	′	∅	∠	∞	∂	∇	∇	∃	¬	√	⊤	
⊥	\	♣	♢	♥	♠	f	f	§	¶	©	f	◇	.	...	...		
:	∴	⌊	⌈	⟨	⌋	⌉	↑	↓	↑	↓	≤	≥	≪	≫	⊂	⊃	
⊆	⊇	∈	∋	≡	~	⊥	≅	∥	≈	≅	≠	∝	×	÷	*		
*	0	°	.	.	∩	∪	∨	∧	◇	⊕	⊗	⊘	f	f	→	←	
↦	↦	⇒	⇐	⇔	←	←	→	⇒	↦	↦	↦	↑	↑	↓	↓		
(h/2p)	∠	≲															

#### 4.4.4 Set of recognized “writings”

The script will interpret the following character sequences as shorthand for superscripts, subscripts or highlighting. The character sequence in this table can be entered as written, some characters are necessary to recognize the shorthand: the visible space »\_« stands for a required space, the red question mark »?« stands for any character except numeric.

Characters entered as in column »In« will be formatted like what you find in column »Out« (depending on chosen font).

In	Out	In	Out	In	Out	In	Out
e+e-	e <sup>+</sup> e <sup>-</sup>	e_	e <sub>-</sub>	e+_	e <sup>+</sup> <sub>+</sub>	\textbf{abc}, {\bf abc}	<b>abc</b>
H+	H <sup>+</sup>	H2+	H <sup>2+</sup>	H_	H <sub>-</sub>	\textit{abc}, {\it abc}	<i>abc</i>
D+	D <sup>+</sup>			microsec	μs	\textsl{abc}, {\sl abc}	<i>abc</i>
+-	±	+/-	±	\sqrt{123}	√123	\textsf{abc}, {\sf abc}	<b>abc</b>
ab^{abc}	ab <sup>abc</sup>	ab\$^{abc}\$	ab <sup>abc</sup>	ab^123?	ab <sup>123?</sup>	\cite{abc}	[abc]
ab_{abc}	ab <sub>abc</sub>	ab\$_{abc}\$	ab <sub>abc</sub>			\bibitem{abc}	[abc]
10e123	10 <sup>123</sup>	10^123	10 <sup>123</sup>	10**123_	10 <sup>123</sup> <sub>+</sub>	\emph{abc}	<i>abc</i>
10e-123	10 <sup>-123</sup>	10^-123	10 <sup>-123</sup>	__abcdef__	<b>abcdef</b>	\small{abc}	abc
10-123_	10 <sup>-123</sup> <sub>+</sub>	12.3e12_		12.3 × 10 <sup>12</sup> <sub>+</sub>			

#### 4.4.5 List Formatting

A different case of recognized “writing” is shown next. Formatting a list in an abstract is not possible, because hard line breaks and other formatting rules are not allowed. With a list in a grouping character sequence (start list with »[+« and end list »+])« it is possible to use a low level formatting. Each item of the list has to be preceded by either »n)« (for numeric itemize lists: 1), 2), 3), ...), »a)« (for alpha itemize lists: a), b), ...), or »-)« (for an unordered list: -, -, ...). A web page showing an itemized list:

The ROXIE program has been devised for the design and optimization of superconducting magnets. The 2-D electromagnetic model of a fast-ramping magnet in ROXIE consists of

1. a representation of strands by line currents,
2. a coupling of the finite element method and the boundary element method to take into account the field contribution of the magnet yoke, as well as eddy-current effects in conductive bulk material,
3. a model for persistent currents,
4. a model for inter-filament coupling currents, and
5. a model for inter-strand coupling currents in Rutherford-type cables.

We will present the coupling of all these effects in the mathematical framework of the theory of discrete electromagnetism.

The 2-D electromagnetic model of a fast-ramping magnet in ROXIE consists of

- a. a representation of strands by line currents,
- b. a coupling of the finite element method and the boundary element method to take into account the field contribution of the magnet yoke, as well as eddy-current effects in conductive bulk material,
- c. a model for persistent currents,
- d. a model for inter-filament coupling currents, and
- e. a model for inter-strand coupling currents in Rutherford-type cables.

We will present the coupling of all these effects in the mathematical framework of the theory of discrete electromagnetism.

The above formatting was achieved by introducing the start/stop codes ([+, +]) into the text as could be seen in the following listing:

The 2-D electromagnetic model of a fast-ramping magnet in ROXIE consists of [+ 1) a representation of strands by line currents, 2) a coupling of the finite element method and the boundary element method to take into account the field contribution of the magnet yoke, as well as eddy-current effects in conductive bulk material, 3) a model for persistent currents, 4) a model for inter-filament coupling currents, and 5) a model for inter-strand coupling currents in Rutherford-type cables. +] We will present the coupling of all these effects in the mathematical framework of the theory of discrete electromagnetism.

Due to the way an abstract text is arranged in the SPMS database and in XML (just one line of characters) at the moment just one itemized list per abstract works in the intended way.

## 5 Check Utilities and Procedures

### 5.1 Check for Completeness

Check the generated PDF files for completeness:

#### Page numbers

Check the generated »<paper\_code>.pdf« files in »./papers« for their page number(s). These should be different from »1« (ok—the first paper will have a starting page number of »1«, but that’s the only one!). If you find more, check the generated paper TOC values (↔ section 3.8.1).

#### Keywords

Check some of the generated »<paper\_code>.tex« files in »./papers« to verify that the »pdfkeywords« field in the L<sup>A</sup>T<sub>E</sub>X files is populated correctly. You should search in the setup command »\hypersetup« for the »pdfkeywords« entry. In line 6 you see a correctly filled entry.

```
1 \hypersetup{pdfpagemode=UseThumbs,%
2     pdfstartview=FitBH,
3     pdftitle={New Technology in Hydrogen Absorbers for Muon Cooling Channels},
4     pdfauthor={M.A.C. Cummings, Northern Illinois University, DeKalb, Illinois},
5     pdfsubject={Proceedings of PAC 2005},
6     pdfkeywords={emittance, simulation, linac, proton, scattering}%
7 }
8 \hypersetup{:
9     :
10    pdfkeywords={}%
11 }
```

If you find entries like line 10, you should check the output of the script »scan-keywords.pl« (↔ section 3.7).

#### Contents

Check the generated »<paper\_code>.pdf« files in »./papers« to verify that the contents of the *raw* PDF file has been placed correctly in the resulting PDF.

If there was a problem you will most likely see a PDF file that looks like the one to the right where just the title, an authors list with institutes, and an abstract is shown together with the missing paper note.

Another likely cause of this is the directories were not defined correctly in the »conference.config« file (look for »raw\_paper\_directory« in the description in section 3.2 on page 18).



### 5.2 Script pagecheck

The Perl script »pagecheck.pl« is used to check the number of pages a pdf file has in the SPMS database against the real pdf file in the »\$raw\_paper\_directory«. During a run of script »spmsbatch.pl« the file »page\_per\_paper.txt« is written containing the number of pages SPMS reported in the last version of »spms.xml«.

The script »pagecheck.pl« reads the file »\$raw\_paper\_directory/page\_per\_paper.txt«, stores the reported pdf file names and number of pages in an internal data structure. Only these pdf files are checked on the local directory by extracting the number of pages (and the page sizes) using »pdftinfo«.

```

E:\DIPAC2005\papers-final>pagecheck.pl
reading pdfs from directory: ./
reading #pages from: './pages_per_paper.txt'
[  1] ITMM01 ==> 5
[  2] ITMM02 ==> 1
[  3] ITMM03 ==> 5
[  4] ITMM04 ==> 5
[  5] CTMM01 ==> 1
[  6] CTMM02 ==> 3
[  7] POM001 ==> 3
[  8] POM002 ==> 3
<...>
[ 99] POW027 ==> 3
[100] ITWA01 ==> 5
[101] CTWA01 ==> 3
[102] CTWA02 ==> 3
checking ITMM01.pdf
checking ITMM02.pdf
checking ITMM03.pdf
checking ITMM04.pdf
<...>
checking CTWA01.pdf
checking CTWA02.pdf

```

Running `pagecheck.pl` will show you first the number of reported pdf files (`<paper_code>`) and number of pages, then it starts to check each pdf file. The error message »Error: PDF version 1.6 - xpdf supports version 1.5 (continuing anyway)« will result in a message about the used PDF version (JACoW now accepts PDFs with version 1.5). The results of the checks are written to »`pagecheck-result.txt`«, a sample output is shown next:

```

ITMM01 page count ok
CTWW99 page count ok; possible problems with non JACoW page size: '1258 x 836'
ITMM02 page count ok; possible problems with non JACoW page size: '612 x 792'
ITMM03 page count ok ==> conflict with JACoW pdf version (v 1.6)
ITMM04 spms: 4, file: 5 pages
CTMM01 =====> empty pdf file
CTMM02 page count ok
POM001 page count ok

```

Purpose	Script checks for inconsistencies in number of pages between database and PDF file.
Directory to place	<code>\$raw_paper_directory</code> ↔ <code>./papers-final</code>
needs	<code>pdftinfo.exe</code>
reads	<code>page_per_paper.txt</code> <code>&lt;paper_code&gt;.pdf</code>
writes	<code>pagecheck-result.txt</code>
output is used by	<i>interactive</i>

## 5.3 Xenu Link Sleuth

Xenu's Link Sleuth checks web sites for broken links. Link verification is done on normal links, images, frames, plug-ins, backgrounds, local image maps, style sheets, scripts and java applets. It displays a continuously updated list of URLs which you can sort by different criteria. A report can be produced at any time. You can find Xenu at <http://home.snafu.de/tilman/xenulink.html>, the downloadable file is  $\approx 550$  kB, the zip file includes a setup executable. You should follow the advice from the web site and check the software for viruses before starting it. The web site has several links for online documentation. Xenu is used to check the script generated web pages and the directory structure for broken links and orphan files **before** uploading this to the JACoW site or making a CD-ROM.

Address	Status	Type	Size	Title	Date	Level	Links Out	Links In	Error
file:///E:/EPAC06/INDEX.HTM	ok	text/html	7760	EPAC 2006 - Contributions to the Proceedings	05.05.2006 23:18:21	0	10		
http://www.epac06.org/	no such host					1		2	Der Servername oder die Serveradresse konnte nicht...
file:///E:/EPAC06/HTML/epac_anim.gif	ok	image/gif	6381		05.05.2006 13:38:11	1		2	
file:///E:/EPAC06/HTML/ogonevfont.jpg	ok	image/jpeg	28616		05.05.2006 13:40:38	1		1	
file:///E:/EPAC06/HTML/SESSION.HTM	ok	text/html	984	EPAC 2006 - List of Sessions	05.05.2006 14:10:41	1	5	2	
file:///E:/EPAC06/HTML/AUTHOR.HTM	ok	text/html	983	EPAC 2006 - List of Authors	05.05.2006 14:10:41	1	5	2	
file:///E:/EPAC06/HTML/KEYWORD.HTM	ok	text/html	984	EPAC 2006 - List of Keywords	05.05.2006 14:10:41	1	5	2	
file:///E:/EPAC06/HTML/INST.HTM	ok	text/html	986	EPAC 2006 - List of Institutes	05.05.2006 14:12:37	1	5	2	
file:///E:/EPAC06/PAPERS/PROCEED.PDF	file not found			Proceedings Volume		1		1	E:/EPAC06/PAPERS/PROCEED.PDF was not found.
file:///E:/EPAC06/PAPERS/PROCEED1.PDF	file not found			Proceedings Pages 1		1		1	E:/EPAC06/PAPERS/PROCEED1.PDF was not found.
file:///E:/EPAC06/PAPERS/ABSTRACT.PDF	file not found			Abstract Booklet		1		1	E:/EPAC06/PAPERS/ABSTRACT.PDF was not found.
mailto:www.schwa@epac.de	skip type					2		4433	
file:///E:/EPAC06/HTML/CONFPROC.CSS	ok	text/css	432		05.10.2004 21:33:58	2		4433	
file:///E:/EPAC06/HTML/BANNER.HTM	ok	text/html	1948	EPAC 2006 - Conference	05.05.2006 14:10:41	2	10	5	
file:///E:/EPAC06/HTML/SESS1.HTM	ok	text/html	7907	EPAC 2006 - List of Sessions	05.05.2006 14:10:21	2	48	1	
file:///E:/EPAC06/HTML/SESS2.HTM	ok	text/html	632	EPAC 2006 - List of Sessions	05.05.2006 14:10:41	2	2	1	
file:///E:/EPAC06/HTML/KEYW1.HTM	ok	text/html	599	EPAC 2006 - List of Keywords	05.05.2006 14:09:46	2	2	1	
file:///E:/EPAC06/HTML/KEYW2.HTM	ok	text/html	640	EPAC 2006 - List of Keywords	05.05.2006 14:10:41	2	2	1	
file:///E:/EPAC06/HTML/AUTH1.HTM	ok	text/html	371771	EPAC 2006 - List of Authors	05.05.2006 14:12:36	2	3909	3909	
file:///E:/EPAC06/HTML/AUTH2.HTM	ok	text/html	1985	EPAC 2006 - List of Authors	05.05.2006 14:10:41	2	29	1	
file:///E:/EPAC06/HTML/INST1.HTM	ok	text/html	31485	EPAC 2006 - List of Institutes	05.05.2006 14:13:01	2	399	1	
file:///E:/EPAC06/HTML/INST2.HTM	ok	text/html	640	EPAC 2006 - List of Institutes	05.05.2006 14:12:37	2	2	1	
file:///E:/EPAC06/HTML/MOXA.HTM	ok	text/html	4053	EPAC 2006 - List of Sessions	05.05.2006 14:10:08	3	6	1	
file:///E:/EPAC06/HTML/MOYAPA.HTM	ok	text/html	2342	EPAC 2006 - List of Sessions	05.05.2006 14:10:08	3	4	1	

Figure 13: Xenu's report for all addresses found

Xenu can give you a good estimate about the total size you need on a CD-ROM, and can also be used to find files or images on your site which are no longer linked to at all—so called orphaned files.

### Statistics for managers

**Correct internal URLs, by MIME type:**

MIME type	URLs	Bytes	Percentage
text/html	640	3863030 Bytes (3772 KB)	65.71%
image/gif	2	3156 Bytes (3 KB)	0.21%
image/png	2	231903 Bytes (226 KB)	0.21%
application/pdf	126	186879672 Bytes (182499 KB)	12.94%
text/css	3	3224 Bytes (3 KB)	0.31%
image/jpeg	201	7048812 Bytes (6883 KB)	20.64%
<b>Total</b>	<b>974</b>	<b>198029797 Bytes (193388 KB)</b>	<b>100.00%</b>

**All pages, by result type:**

Result type	URLs	Percentage
ok	974	99.29%
no such host	3	0.31%
skip type	4	0.41%
<b>Total</b>	<b>981</b>	<b>100.00%</b>

[Return to Top](#)

**This report has been produced by [Xenu's Link Sleuth](#)**

Figure 14: Xenu's statistics for total and mime type dependent space needed

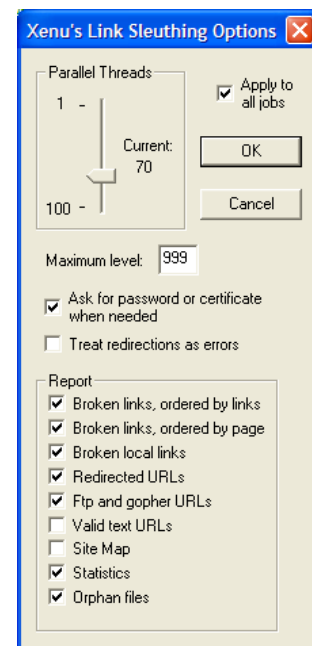


Figure 15: Xenu's options menu

## 5.4 Script pdf-showfont

The Perl script »pdf-showfont.pl« can help you to locate »Type 3« fonts and fonts which are not embedded (»emb = no«). The font usage is reported for every page, so it is easy to spot problematic pages.

```
>pdf-showfonts.pl Scripts-HowTo.pdf
  Title : untitled
  Producer : Acrobat Distiller 7.0.5 (Windows)
  CreationDate : 04/26/06 14
  ModDate : 04/26/06 14
  Pages : 7
  Page size : 595 x 792 pts
  File size : 408445 bytes
  Optimized : yes
  PDF version : 1.4
Seaching page: 1
<...>
Seaching page: 7
adding page: 1 [ 1 2 3 4 ]
adding page: 2 [ 1 2 3 4 5 ]
<...>
adding page: 7 [ 1 2 3 4 ]
output written on Scripts-HowTo.fonts
```

In the resulting »<pdf-file>.fonts« you will find all fonts used on each page (»P00001...P00007«), the type (check the listing for »Type 3« fonts), embedded fonts (»emb = yes«), subsetted fonts (»sub = yes«), and Unicode fonts (»uni = yes«). The object id is the same when a font is used more than once in the file.

H	: name	type	emb	sub	uni	object	ID
P00001	: -----						
P00001	: [none]	Type 3	yes	no	yes	56	0
P00001	: Times-Roman	Type 1	no	no	no	55	0
P00001	: Times-Bold	Type 1	no	no	no	60	0
P00002	: -----						
P00002	: Times-Bold	Type 1	no	no	no	60	0
P00002	: Times-Roman	Type 1	no	no	no	55	0
P00002	: Symbol	Type 1C	yes	no	yes	40	0
P00002	: Helvetica	Type 1	no	no	no	41	0
P00003	: -----						
P00003	: Times-Roman	Type 1	no	no	no	55	0
P00003	: Times-Bold	Type 1	no	no	no	60	0
P00003	: Courier	Type 1C	yes	no	no	44	0
P00004	: -----						
<...>							
P00007	: -----						
P00007	: [none]	Type 3	yes	no	yes	45	0
P00007	: Times-Roman	Type 1	no	no	no	55	0
P00007	: Times-Bold	Type 1	no	no	no	60	0

Purpose	Script to locate »Type 3« or non-embedded fonts in PDF files
Directory to place	<i>in pdf directories</i>
needs	pdfinfo.exe
reads	<pdf-file>.pdf
writes	<pdf-file>.fonts
output is used by	<i>interactive</i>

## 5.5 Script pdfopt

»pdfopt« uses Ghostscript to convert the Adobe Portable Document Format (PDF) file »input.pdf« to a so-called optimized form in »output.pdf«. Optimization puts the elements of the file into a more linear order and adds »hint« pointers, allowing Adobe's Acrobat(TM) products to display individual pages of the file more quickly when accessing the file through a network.

Purpose	Optimization of PDF files for fast web view
Directory to place	<i>tools directory in PATH</i>
needs	Ghostscript
reads	<pdf-file>.pdf
writes	<pdf-file>-opt.pdf
is used by	gen_texpdf.bat

At the moment (possibly due to an error in the underlying Ghostscript machine) »pdfopt« *destroys* some of the PDF files when optimizing and linearizing them (pdf error 110). As long as this is not fixed, this utility will not be used and the corresponding lines in the automatically generated batch files will be commented out. This has been changed in version 4.2c and can be found in the change history of JPSP-manual.



## 6 Files Delivered with the Scripts

To Be Extended

### 6.1 File »papers/abstract-base.tex«

Basic file for the generation of an abstract booklet using the ConT<sub>E</sub>Xt T<sub>E</sub>X-engine (↔ section 4.2).

### 6.2 File »html/confproc.css«

The file »confproc.css« is a Cascading Style Sheet. CSS is a stylesheet language used to describe the presentation of a document. Its most common application is to style web pages in HTML and XHTML. The CSS specifications are maintained by the World Wide Web Consortium (W3C).

At the moment only very basic tags are provided to influence the presentation.

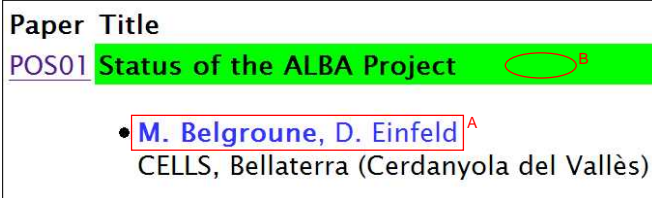
```
1 body { background-color: #FFFFFF; }
2 .author_cl { color: rgb(51, 51, 255); }
3 .author_se { color: rgb(255, 0, 0); }
4 .b { color:#000000; }
5 .w { color:#FFFFFF;}
6 sub, sup { font-size: 80%; }
7 td.paptitle {background-color: lime; font-weight: bold; }
8 td.paptitle_key {background-color: lime; font-weight: bold; text-align: left; vertical-align: middle; }
```

Line 1 of the cascading style sheet defines the background of all pages to white.

The setting for ».author\_cl« in line 2 determines all author names in »Session«, »Classification«, »Authors«, and »Keyword« pages (see A). Currently there is just the text color defined.

The background color and font weight for the paper title is set by »td.paptitle« in line 7. This setting is used for »Session«, »Classification«, and »Authors« pages (see B).

The entry for »td.paptitle\_key« in line 8 differs a bit from the entry for »td.paptitle« above. This entry is used for the background color of the title line in »Keyword« pages. On these pages the other keywords of a paper are listed to the right of the title bar in one to three lines. To keep a vertically centered text in the title bar, additional parameters are specified (vertical-align: middle).



The settings in lines 4 and 5 are solely for the appearance of classification and sub-classification names in the selector page for »List of Classifications«.

On the right you see three different ways of using classification and subclassification. The topmost figure left shows the standard EPAC style: Main classification without link and subclassifications with the ► symbol and link on white background.

The lower left figure shows only main classifications with links, no subclassifications present. On the right you see the PAC style (here PAC'05) with main classifications with or without subclassifications, all with links.

**List of classifications**

**Accelerators and Facilities**

- ▶ [Advanced Accelerators](#)
- ▶ [Electron Linacs](#)
- ▶ [Exotic Beams](#)
- ▶ [Facility Operations \(Performance\\_Status\)](#)
- ▶ [Free-Electron Lasers](#)
- ▶ [Ion Linacs](#)
- ▶ [Linear Colliders](#)

**Applications**

- ▶ [Industrial](#)
- ▶ [Medical](#)
- ▶ [Other](#)

**List of classifications**

- ▶ [Laboratory Report \(Posters only\)](#)
- ▶ [Plenary Talk](#)
- ▶ [WG1 - Storage Ring Radiation Sources](#)
- ▶ [WG2 - Energy Recover Linac Based Radiation Sources](#)
- ▶ [WG3 - Free Electron Lasers](#)
- ▶ [WG4 - Low Emittance Electron Sources](#)
- ▶ [WG5 - Novel Diagnostics and Stability Issues](#)

**List of classifications**

- ▶ [Accelerator Technology](#)
- ▶ [Cryogenic Systems and Technology](#)
- ▶ [Electrical Systems](#)
- ▶ [Facilities](#)
- ▶ [Other](#)
- ▶ [Power Supplies and Conversion](#)
- ▶ [Safety Systems](#)
- ▶ [Superconducting RF](#)
- ▶ [Target Technology](#)
- ▶ [Vacuum Systems and Technology](#)
- ▶ [Advanced Concepts](#)
- ▶ [Applications of Accelerators](#)
- ▶ [Controls and Computing](#)
- ▶ [Application Programming](#)
- ▶ [Control Systems](#)

The setting for ».author\_se« in line 3 effects the author name in »Authors Index« pages. Currently there is just the text color defined, highlighting the **selected author**.

**Belgroune, M.**

**Paper Title**

[POS01](#) **Status of the ALBA Project**

- **M. Belgroune, D. Einfeld**  
CELLS, Bellaterra (Cerdanyola del Vallès)

Line 6 with »sup« and »sub« parameter settings will effect the typesetting of superscripts and subscripts. In the shown CSS file only the size is defined, but this parameter can easily be used to control the generated web pages for wrongly coded superscripts/subscripts by the script like the one on the right (»10<sup>-50</sup>« is correct).

In this case the entry was changed to:

```
sub, sup { font-size: 150%; color: red;}
```

induces transient effects such that the head of t  
 rated twice as much than the rest of the pulse.  
 energy spectrum shows a strong time depend  
 energies in the first 10<sup>-50</sup> nanoseconds of the  
 by 1.35 μs of steady behaviour. In order to me  
 lution of the beam energy and energy spread a  
 east 50MHz bandwidth is required. Three differ

### 6.3 File »paper-finals/keywords.list«

This file contains the keyword list which is used by the script »scan-keywords« (↔ section 3.7) to determine the keywords in conference papers.

The file is derived from the JACoW keyword list; it is available on the [JACoW](#) web site. You may want to add additional keywords to the list (e. g. PAC05 added »SNS« and »Spallation Neutron Source« to the master list).

If you add keywords to the (your) list, you have to obey to the list's syntax. Each keyword is given twice, once in its reference form, and then by a representation with regular expressions (Perl regex) in the following way:

```
electromagnetic-fields=electromagnetic.{0,1}field.{0,1}
```

so now `electromagnetic-fields` is found even when written as

```
electromagnetic_fields
electromagnetic_field_
electromagnetic-field_
electromagnetic↓fields
electromagnetic↓field_
electromagnetic-↓fields
electromagnetic-↓field_
```

This way the keyword hit rate on DIPAC2003 got more than 250% better.

The regular expression syntax of Perl is very extensive, for the keywords only two are actually used, the third one is an example to demonstrate the possible use:

```
factory=factor(y|ies)
```

- `.{0,1}` an arbitrarily character sequence of minimum 0 and maximum 1 character may appear here; an example is given above with »`electromagnetic-fields`« on the last page
- `factor(y|ies)` the character sequence »`y`« or »`ies`« must appear (one of the sequences may be empty). With this regular expression the keyword »`factory`« gets a hit when »`factory`« or »`factories`« is found.
- `factor(y|ies|)` this will change the regular expression from above so that the keyword »`factory`« will get a hit when just »`factor`« is found.

## 7 Keywords, Library Data and Repatriation<sup>10</sup>

Once the proceedings are ready for publication there are a few more steps required if the SPMS has been used. The keywords generated by the scripts need to be uploaded to the database so that they can be used in the citation indexes which are published on the JACoW site.

### 7.1 Generation of Upload Scripts

These activities are to be carried out by the conference editor.

The script »keyword-sql.pl« is used to generate a procedure file (»keywords\_plsql.txt«) to load the keywords for each paper into SPMS.

Each generated line in »keywords\_plsql.txt« looks like

```
exec keywords.add ('<paper_code>', '<keyword>');  
exec keywords.add ('FRXAPA01', 'target');
```

Table 8: »keyword-sql.pl«

Purpose	Loading of keywords for each paper
Directory	\$raw_paper_directory ↪ ./papers-final
reads	keyword-count.txt
writes	keywords_plsql.txt
output is used by	conference database manager

The script »keywords-regexps-sql.pl« is used to generate a procedure file (»keyw\_regexp\_sql.txt«) to load the keywords and their corresponding regular expression into SPMS.

Each line in the file looks like:

```
exec keywords.set_regexp ('<key_word>', '<regular_expression>');  
exec keywords.set_regexp ('target', 'target.{0,1}');
```

Table 10: »keywords-regexps-sql.pl«

Purpose	Loading of keywords and regular expressions into appropriate table for repatriation
Directory	\$raw_paper_directory ↪ ./papers-final
reads	keywords.list
writes	keyw_regexp_sql.txt
output is used by	conference database manager

<sup>10</sup>Chapter provided by John Poole

## 7.2 Uploading

The conference database administrator takes the two procedure scripts mentioned above and firstly executes »keywords\_plsql.txt« and then »keyw\_regexp\_sql.txt«.

There may be some errors from the second script if it is trying to upload keyword data for a keyword that has not been chosen in the conference – these errors can be ignored.

## 7.3 Library data

Once the keyword data has been uploaded in the conference database, the citation data can be extracted. The package `Library_Data` takes care of this. There are two procedures – one for Open Archive Initiative format and the other for SPIRES format.

Table 12: Citation Data Formats  
**OAI format**

```
TI: The Global Design Initiative for an International Linear Collider
AU: Barry Barish (CALTECH, Pasadena, California)
KW: collider, electron, linear-collider, positron, proton
SE: 03 Linear Colliders, Lepton Accelerators and New Acceleration Techniques
CL: A03 Linear Colliders
NP: 4
PP: 1
EM: barish@ligo.caltech.edu
URL: http://www.JACoW.org/e06/papers/moxpa01.pdf
```

### **SPIRES format**

```
add;
DOC-TYPE = Conference Paper;
REPORT-NUM = EPAC 2006-MOXPA01;
ASTR;
AUTHOR = Barish, B.C.;
AFFILIATION = CALTECH, Pasadena, California;
TITLE = The Global Design Initiative for an International Linear Collider;
DATE = Jun 2006;
PPF-SUBJECT = I;
P = 4;
MEETING-NOTE = ;
TT = The Global Design Initiative for an International Linear Collider;
CONF-NUMBER = ;
URL = http://www.JACoW.org/e06/papers/moxpa01.pdf;
;
```

**These activities are to be carried out by the JACoW Repository Database Manager.**

The two procedures produce the output as web pages and the administrator should collect the data using `wget` with the conference URL e.g.

```
»wget http://oraweb.cern.ch/pls/EPAC06/Library_Data.OAI« and
»wget http://oraweb.cern.ch/pls/EPAC06/Library_Data.SPIRES«.
```

The resultant files should be transferred to the JACoW webserver and placed in the directory `JACoW/Library-Data/` and appropriate links created in <http://JACoW.org/JACoW/LibraryData.html>.

The administrator should then send an email to the SPIRES administrator and the CERN Document Server (CDS) manager telling them that the data is available.

## 8 Known Bugs and 'What to Do When...'

To Be Submitted

Compare all errors that have occurred and could not be explained, to the ones documented here. If you found anything new, please inform the author and send a zipped file with the following files:

- spms.xml
- conference.config
- spmsbatch.pl
- any other file that was involved in causing the error.

### 8.1 Selected Author not Highlighted in Affiliation

**Drivotin, O.I.**

Paper Title  
[1237](#) **Simulation and Numerical Investigation of Self-Consistent Distributions for Charged Particle Beam**

- **O.I. Drivotin, V.V. Semenov**  
 St. Petersburg State University, Applied Mathematics & Control Processes Faculty, St. Petersburg

### 8.2 Selected Author Appears Twice in Affiliation and With Paper Code and Abstract

**van der Geer, S.B.**

Paper Title  
[WG421](#) **Production of Ultra-Short, High-Brightness Waterbag Bunches**

- **S.B. van der Geer, O.J. Luiten, M.J. Van der Wiel, S.B. van der Geer**  
 TUE, Eindhoven

At Eindhoven University of Technology several closely related projects aim at the production of ultra-short high-brightness electron bunches. An overview of these efforts is given, with emphasis on micrometer precise rf-photogun manufacture and three dimensional compression of uniformly filled (waterbag) electron bunches.

[WG421](#) **Production of Ultra-Short, High-Brightness Waterbag Bunches**

- **S.B. van der Geer, O.J. Luiten, M.J. Van der Wiel, S.B. van der Geer**  
 TUE, Eindhoven

The reason for this behavior is that the procedure to store and show the author's affiliation is at the moment not implemented to deal with authors who have two or more affiliations for one paper. Until this is implemented the only way to fix the problem is to delete all but one of the affiliations in the »Authors List«.

FLS 2006 Author List      Volker R.W. Schaa    [Logout](#)   [Home](#)   [Find Profiles](#)   [Search](#)   [My Schedule](#)

Abstract: WG421 Production of Ultra-Short, High-Brightness Waterbag Bunches  
 Paper ID: WG421  
 Presentation Type: Oral Working Group Contribution  
 Program Session: WG4 -- Working Group 4  
 05/16/2006 1100 -- 1800  
 Seminar Room 1D/292

The X indicates the current Primary Author and Speaker. All others are considered co-authors. Use the radio buttons to change these values. Use the check boxes to remove an individual. You can not remove the primary author.

- If your speaker is not an author first add the speaker's name as an author then use the radio button to set them as the speaker, next remove their name from the list of authors. The speaker's name will remain and be visible on the Abstract List.
- To add an author with multiple affiliations complete the steps in the "Add a New Author" procedure for each affiliation.
- Sort order applies to individual co-authors with multiple affiliations. Enter a numeric value to adjust the order in which affiliations appear.

Primary	Speaker	Owner	Remove	Author	Affiliation	On Leave	Sort Order
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Bas van der Geer	<a href="#">Technische Universiteit Eindhoven (TUE) Department of Applied Physics</a>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jom Luiten	<a href="#">Technische Universiteit Eindhoven (TUE) Department of Applied Physics</a>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Marnix Van der Wiel	<a href="#">Technische Universiteit Eindhoven (TUE) Department of Applied Physics</a>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Bas van der Geer	<a href="#">Pulsar Physics (PP)</a>	<input type="checkbox"/>	

### 8.3 Abstract Booklet Stops While Compiling

When compiling the Abstract Booklet I get errors like the following...

```
! Missing $ inserted.
<inserted text>
      $
<to be read again>
      _
\PUd:Abstract ...ts, wiggler design, srf cavity Q_
                                     L, halo, etc. Measurements...

\@su:document:entry:stop ...ckedupData {Abstract}
                                     \endgraf \PickedupData {Fo...

\dosetups ...fi :#1}{\csname ??su :#1\endcsname }
                                     \empty
\nextl #1,->\dosetups {#1}
          \doprocesscommaitem
...
1.1509   \StopEntry
```

## 9 List of Scripts and Documentation with Versions and Change History

### 9.1 keyword-sql.pl

Changes			
Date	Version	Name	Comment
09. Dec 2005	0.9	volker rw schaa	• first try
12. Dec 2005	0.92	volker rw schaa	• minor changes
18. Dec 2005	0.95	volker rw schaa	• changed from SQL file to SMPS procedure (from »insert« to exec »spms.abstract_keywords«)
20. Mar 2006	0.99	volker rw schaa	• some updates to documentation
12. Jul 2006	1.0	volker rw schaa	• GPL license added
28. Aug 2007	1.1	John H Poole	• Changes to match new procedure (»spms.abstract_keywords« to »keywords.add«)

### 9.2 pagecheck.pl

Changes			
Date	Version	Name	Comment
03. Jun 2004	0.3	volker rw schaa	• first try
28. Apr 2006	0.4	volker rw schaa	•
May 2006	1.0	volker rw schaa	• small adjustments/final version
12. Jul 2006	1.1	volker rw schaa	• GPL license added
19. Jul 2006	1.2	john pool/vrws	• adjustment to paper size, which is sometimes 791/792. Now a ranges is accepted (592 > width > 597, 790 > height > 794)
23. Jul 2006	1.3	vrws	• pagecheck now reports a wrong pdf version (version > 1.5) and catches empty file errors
17. Nov 2007	2.0	vrws	• in addition font embedding and Type 3 fonts are reported using PDFFonts
21. Nov 2007	2.1	vrws	• display of elapsed time

### 9.3 scan-keywords.pl

Changes			
Date	Version	Name	Comment
07. Jul 2003	0.9	volker rw schaa	• keywords in the list substituted by regular expressions in the following way: electromagnetic-fields=electromagnetic.{0,1}field.{0,1}, so now electromagnetic-fields is found when written as electromagnetic_fields electromagnetic_field_ electromagnetic-field_ electromagnetic_↓fields electromagnetic_↓field_ electromagnetic-↓fields electromagnetic-↓field_ Hit rate on DIPAC2003 more than 250% better
20. Dec 2003	1.0	volker rw schaa	• keyword list now loadable
	1.1	volker rw schaa	• script is now independent of settings in the spms script's config file
	1.2	volker rw schaa	• acronym list generated
07. Dec 2004	1.3	volker rw schaa	• read keyword list from current directory
19. May 2006	1.4	volker rw schaa	• acronym file not generated anymore
12. Jul 2006	1.5	volker rw schaa	• GPL license added
20. Oct 2008	1.6	volker rw schaa	• length of paper_code changed from [4,8] to [1,10] (InDiCo codes are very short)



## 9.4 spmsbatch.pl

Changes			
Date	Version	Name	Comment
22. Apr 2003	0.6	volker rw schaa	
28. Apr 2003	0.8	volker rw schaa	
08. May 2003	0.9	volker rw schaa	
07. Jun 2003	0.92	volker rw schaa	<ul style="list-style-type: none"> <li>• sort order corrected by using ArbBiLex</li> </ul>
05. Oct 2003	0.95	volker rw schaa	<ul style="list-style-type: none"> <li>• coloring of authors' index,</li> <li>• conversion of writing authors, abstracts, and institutes</li> <li>• using Unicode (&amp;names; + &amp;#entity;)</li> </ul>
03. Nov 2003	0.96	volker rw schaa	<ul style="list-style-type: none"> <li>• config file definitions refined, xml schema definition adapted</li> </ul>
15. Nov 2003	1.0	volker rw schaa	<ul style="list-style-type: none"> <li>• some minor nuisances taken care of (mailto, &amp;# in config file, ...)</li> </ul>
21. Jan 2004	1.1	volker rw schaa	<ul style="list-style-type: none"> <li>• read additional file with production notes</li> </ul>
03. Feb 2004	1.2	volker rw schaa	<ul style="list-style-type: none"> <li>• abstracts will now be embedded into keyword and author list (in addition to session list)</li> </ul>
09. Feb 2004	1.21	volker rw schaa	<ul style="list-style-type: none"> <li>• change of some block related T<sub>E</sub>X commands into environments (<code>\raggedright</code> into <code>flushleft</code>)</li> </ul>
10. Apr 2004	2.0	volker rw schaa	<ul style="list-style-type: none"> <li>• adaption to matt's xml structure</li> </ul>
22. Apr 2004	2.1	volker rw schaa	<ul style="list-style-type: none"> <li>• nearly full adaption to matt's xml,</li> <li>• (re)start of documentation,</li> <li>• beautifying script after wild changes...</li> </ul>
29. Apr 2004	2.2	volker rw schaa	<ul style="list-style-type: none"> <li>• second stage of docu,</li> <li>• abstracts now internal instead of external,</li> <li>• script runs with Matt's test set (after some remedies: one line <code>&lt;keyword&gt;-entries</code>, supplying missing fields, etc.)</li> </ul>
06. Jun 2004	3.0	volker rw schaa	<ul style="list-style-type: none"> <li>• restart with very old version after disk crash, backup from old notebook not usable (???!),</li> <li>• files on new notebook weren't synchronized due to harddisk swap after initial tests,</li> <li>• status: loss of all adapted scripts</li> <li>• history: retyped from printed version's first and only page :-)</li> </ul>
10. Jun 2004	3.1	volker rw schaa	<ul style="list-style-type: none"> <li>• everything adapted,</li> <li>• docu missing,</li> <li>• scripts ugly, this is not a distributable version!!</li> <li>• authors are listed one per line in all displays (no combined entry per institute, tags <code>&lt;footnote&gt;</code> and <code>&lt;agency&gt;</code> are not honored)</li> </ul>
20. Jul 2004	3.2	vrws	<ul style="list-style-type: none"> <li>• extending the script for abstract booklet production with ConT<sub>E</sub>Xt</li> </ul>
30. Aug 2004	3.3	vrws	<ul style="list-style-type: none"> <li>• change of hard-coded style info into style sheet for author and paper title, etc.</li> </ul>
24. Sep 2004	3.8	vrws	<ul style="list-style-type: none"> <li>• changed for CD production all file names to UPPERCASE</li> </ul>
04. Oct 2004	3.9	vrws	<ul style="list-style-type: none"> <li>• bugs fixed from introduction of UPPERCASE file names</li> </ul>
11. Oct 2004	3.91	vrws	<ul style="list-style-type: none"> <li>• all talks (the ones with a video = coupling) got transparencies to patch for missing files (edit key: #ä)</li> </ul>
13. Oct 2004	3.92	vrws	<ul style="list-style-type: none"> <li>• affiliation (<code>contrib_abb/presenter_abb</code>) is now composed of <ul style="list-style-type: none"> <li>• a) affiliation + town, if »Affiliation_abbrev« exists, otherwise</li> <li>• b) affiliation.name1 + affiliation.name2 + Town.</li> </ul> </li> </ul>
17. Nov 2004	3.93	vrws	<ul style="list-style-type: none"> <li>• keyword generation (search) from pdf files now in script »scan-keywords.pl«</li> <li>• output file will be read to get keywords (<code>\$raw_paper_directory/keyword-count.txt</code>)</li> <li>• keyword generation from abstract text commented out (edit key: #ßß)</li> <li>• change history for version v3.94 – v4.03 lost</li> </ul>
10. Oct 2005	4.04	vrws	<ul style="list-style-type: none"> <li>• classification/subclassification PAC conferences have a different way of using class/subclass: a classification may not have a subclass, or may have entries under the classification and subclassification. This should be fixed now!</li> </ul>
19. Oct 2005	4.05	vrws	<ul style="list-style-type: none"> <li>• checking whether a slides file (<code>&lt;file_type abbrev="TRAN"&gt;Transparencies &lt;/file_type&gt;</code>) mentioned in XML is really there. A slides entry will only be written, when a file entry exists in <code>\$slides_directory</code></li> </ul>

Date	Version	Name	Comment
24. Oct 2005	4.06	vrws	<ul style="list-style-type: none"> <li>• this version finally includes the (not so)special last name translation routine, which was already used in v 3.98/9, but somehow discarded. The translation to ISO-Latin 1 is surely not an good idea, we should decide on UTF8!</li> </ul>
09. Nov 2005	4.07	vrws	<ul style="list-style-type: none"> <li>• a bit more ISO 9660 in the scripts :-) all files now with .HTM</li> <li>• clean-up of unused code</li> </ul>
Nov 2005	4.08	vrws	<ul style="list-style-type: none"> <li>• some new UTF8 code fragments added to translation table which are produced when file is stored directly (xml save, without cut/paste to file or wget)</li> </ul>
10. Jan 2006	4.09	vrws	<ul style="list-style-type: none"> <li>• lead/trailing spaces in all &lt;xname&gt; tags deleted</li> <li>• all code and comments deleted for keyword generation (now scan-keyword.pl)</li> </ul>
11. Jan 2006	4.10	vrws	<ul style="list-style-type: none"> <li>• more lead/trailing spaces in tags deleted,</li> <li>• sub classification string is now initialized (to »" "«) when classification is read</li> <li>• now a local default startup file »INDEXLOC.HTM« is created</li> </ul>
14. Feb 2006	4.11	vrws	<ul style="list-style-type: none"> <li>• Version 4.10 brought a new error by initialized sub classification string to " ", the test still was on "="!</li> <li>• id for »@« from »&amp;#064;« changed to »&amp;#65131;«</li> </ul>
29. Apr 2006	4.12	vrws	<ul style="list-style-type: none"> <li>• Reintroduction of provisions for page count checking (output file »pages_per_paper.txt«)</li> <li>• the new version of SPMS has a new tag structure &lt;coordinators&gt;...-&lt;/coordinators&gt; which contains an inconsistent use of the &lt;institute&gt; tag structure. The &lt;coordinators&gt;-code is skipped in reading</li> </ul>
17. May 2006	4.13	vrws	<ul style="list-style-type: none"> <li>• error corrected in transparency detection (uppercase/lowercase ».pdf«)</li> <li>• output of xml lines in debug log with »«</li> <li>• clean-up of config file (all unused variables deleted)</li> <li>• clean-up of debug lines</li> </ul>
22. May 2006	5.0	vrws	<ul style="list-style-type: none"> <li>• now optimized pdfs (for Fast Web View) will be produced by gen_texpdf.bat</li> </ul>
28. May 2006	5.1	vrws	<ul style="list-style-type: none"> <li>• some more variables initialized, so the number of error lines when processing non finalized xml files has been drastically reduced</li> <li>• in early stages of a conference 'New Affiliation Request Pending' might cause lots of error messages which are now reported, variables initialized</li> <li>• substitution of »\$« and »%« were not line global but local, fixed now</li> </ul>
12. Jun 2006	5.2	vrws	<ul style="list-style-type: none"> <li>• in an early stage of a conference »paper_code«s are not present in the XML file while »abstract_id«s are. Code revised so that first »abstract_id« is taken for \$paper[], then in the next stage »paper_code« overwrites this setting, if present. Now (test) output can be generated without »paper_code« setting</li> <li>• the XML file is now opened as assumed »UTF8« input. So now the two and three byte »UTF8« codes (hopefully) are converted to the correct glyphs (still in test)</li> </ul>
17. Jun 2006	5.3	vrws	<ul style="list-style-type: none"> <li>• opening the XML as UTF8 helps in cases (FEL'06) but generates lots of errors in others (FLS'06); in addition the code is much slower using the utf8 option (0:10m compared to 2:07m for FEL'06). Now back to pre-version v5.2, code must be changed to handle more utf8 2 byte and 3 byte sequences</li> </ul>
25. Jun 2006	5.4	vrws	<ul style="list-style-type: none"> <li>• Matt has repaired the &lt;coordinators&gt;...&lt;/coordinators&gt; tag structure, so now everything is read again</li> </ul>
12. Jul 2006	5.5	vrws	<ul style="list-style-type: none"> <li>• fixing error in xml when »chair« has no email (bug in generated XML)</li> <li>• fixed problem with ConT<sub>E</sub>Xt output not being converted to T<sub>E</sub>X chars (some instances of author names and title lines escaped my notice)</li> <li>• changed substitution of »&amp;« to »\&amp;«</li> <li>• title entries in KEYW*.HTM and AUTH*.HTM extended to contain actual keyword and author. For KEYW*.HTM the actual keyword is added to the meta data »keywords« too. This is not directly visible on the web due to the framed setting, but indexing robots (Google, etc) which link them directly can show these infos now.</li> <li>• GPL license added</li> </ul>
26. Jul 2006	5.6	vrws	<ul style="list-style-type: none"> <li>• email address field initialized (we really do not need the email address for anything useful - and in »PNP12« there is no email at all)</li> <li>• more initializations: »\$session_startp/\$session_endp« for sessions without papers (happened accidently in FEL2006 when file was cut off)</li> <li>• problems with »e-« substitution when something like »one- or two-fold« comes up, now corrected</li> <li>• recognition of writing exponentiations (e9/10**9/10-9/etc.) improved</li> </ul>
29. Jul 2006	5.7	vrws	<ul style="list-style-type: none"> <li>• list environment formatting doesn't really work the way as intended, formatting fixed now</li> </ul>

Date	Version	Name	Comment
			<ul style="list-style-type: none"> <li>• special symbols or L<sup>A</sup>T<sub>E</sub>X notations with <math>\\$. . . \\$</math> are hard to convert, so if the <math>\\$s</math> (dolares) come in pairs they will be deleted otherwise we have to deal with them directly. . .</li> <li>• special L<sup>A</sup>T<sub>E</sub>X commands converted to ConT<sub>E</sub>Xt for Abstract booklet processing</li> </ul>
14. Aug 2006	5.8	vrws	<ul style="list-style-type: none"> <li>• »pdfopt« destroys some of the PDF files (error 110). The code is commented out now</li> <li>• addition of special symbols or L<sup>A</sup>T<sub>E</sub>X notations (Ohm, <math>\text{cm}^{+x}</math>, <math>\text{bf}\{xx\}</math>)</li> <li>• conversion of 10xx to power <math>10^{xx}</math> corrected (some zip codes appeared in power notation)</li> <li>• output of elapsed time to ease run-time measurements</li> </ul>
16. Aug 2006	5.9	vrws	<ul style="list-style-type: none"> <li>• when there is no PDF file present in <math>\\$paper\_directory</math> (./PAPERS) no link will be generated anymore from »Authors list«, »Session list«, and »Classification list«. Instead the &lt;papercode&gt; is given without link and a non-breakable space (<math>\&amp;nbsp;</math>) is output instead of the page number. This is due to conferences where either no papers will be uploaded (i.e. PNP12@GSI), or for workshops with only transparencies shown (FLS2006@DESY).</li> <li>• initialization error corrected when writing »SCRTYPE« with document types other than »DOC« or »TeX« (in this case Open Office »ODT«)</li> </ul>
26. Aug 2006	5.10	vrws	<ul style="list-style-type: none"> <li>• number of papers per line per author in T<sub>E</sub>X and ConT<sub>E</sub>Xt output corrected. Error was: first line just one paper, next lines wanted number of papers, due to wrong initialization. Corrected</li> <li>• HTML pages list papers with starting page number »0« as long as there are no &lt;toc&gt; values presented. Now changed from »0« to »1«</li> <li>• list formatting ([+ ... +]) has been extended to [+ -) text-a -) text-b +] for unordered lists</li> </ul>
21. Sep 2006	5.11	vrws	<ul style="list-style-type: none"> <li>• BESSY enhancements: sound files (»MP3«) for talks now with link in web pages (thanks to Roland Müller!)</li> <li>• script adapted to Acrobat 7's way of writing Media- and Crop-Boxes</li> <li>• code for »itemize lists« produced a wrong (or additional) list/list items, if the text contained closing braces »x)« without preceding space character.</li> <li>• »Missing Papers« (PAPER NOT YET RECEIVED) are now generated directly in the way as needed for LINAC04 and DIPAC03/05: whole page with title, authors, institutes, and abstract (column one) and »Missing Note« in column two.</li> </ul>
09. Oct 2006	6.0	vrws	<ul style="list-style-type: none"> <li>• changes due to LINAC 2006 and November meeting at DESY</li> <li>• corrected wrong html generation (missing »&gt;« in several &lt;td&gt; elements)</li> </ul>
18. Dec 2006	6.1	vrws	<ul style="list-style-type: none"> <li>• changes frameset to allow scrolling of banner and list content</li> <li>• detected that since the »TOC« values are generating by »SPMS«, only non-numbered session sheets are supported (whether this is a standard in book printing is open)</li> <li>• \cleardoublepage reintroduced for non-numbered session sheets (otherwise the whole counting is completely off)</li> <li>• scaling in pdf-inclusion changed from »scale=1.0« to »noautoscale«, because »scale=1.0« will recognize cropbox measures and the included pdf will shrink</li> <li>• process of uppercasing started due to problems experienced with EPAC2006 and MAC-OS: now all generated HTML and PDF files have uppercase filenames</li> </ul>
04. Jan 2007	6.2	vrws	<ul style="list-style-type: none"> <li>• html-generating code for keyword/author corrected: loop produced invisible code for non-existing local link (href="KEYW1.HTM#"/"AUTH1.HTM#"). So 50 byte per keyword and 47 per author are saved.</li> <li>• complete code of sub »inclsession_in_proctex« removed (see edit mark #070109) due to page offset introduced by \cleardoublepage (v6.1)</li> <li>• removed notice generation in »PROCEEDINGS-PAGES1.TEX« for missing pdf files</li> </ul>
16. Jan 2007	6.3	vrws	<ul style="list-style-type: none"> <li>• due to problems in uppercasing (V6.1) using »pdfpages« pages which can not cope with the uppercase PDF extension (»unknown graphics extension .PDF.«) the extension is now left out.</li> </ul>
02. Mar 2007	6.4	vrws	<ul style="list-style-type: none"> <li>• »\$santitle« globally used because sanitizing the title isn't enough, it's also needed for the "\contentsline" macro</li> </ul>
23. Mar 2007	6.5	vrws	<ul style="list-style-type: none"> <li>• pdfopt which was commented out, is now dropped due to Acrobat's Optimize features</li> </ul>
28. Apr 2007	7.0	vrws	<ul style="list-style-type: none"> <li>• started with »fileURL« functionality</li> <li>• id for »@« (»&amp;#65131/FE6B«) changed to (»&amp;#65312/FF20«)</li> </ul>
07. May 2007	7.1	vrws	<ul style="list-style-type: none"> <li>• major code changes due to reading of XML files produced by InDiCo</li> </ul>
28. May 2007	7.2	vrws	<ul style="list-style-type: none"> <li>• »&lt;chair&gt;« tag now inside &amp; »&lt;chairs&gt;« tags due to InDiCo's possibility to have more than one chair per session</li> </ul>

Date	Version	Name	Comment
			<ul style="list-style-type: none"> <li>● fallback code for JACoW conferences without »&lt;chairs&gt;« tags</li> </ul>
17. Jul 2007	7.3	vrws	<ul style="list-style-type: none"> <li>● the proceedings T<sub>E</sub>X file doesn't use the sanitized version of classification/subclassification and stumbles over »&amp;«</li> <li>● base setting for footers/headers now PAC style</li> <li>● »&lt;chairs&gt;« tag code for JACoW conferences remove, SPMS now has the same structure</li> </ul>
19. Jul 2007	7.4	vrws	<ul style="list-style-type: none"> <li>● search for error putting accents atop on accents (»\''«), found code but no idea what it does, therefore commented out: »#070719&gt;«</li> <li>● statistics about used document type extended to show Open Office documents (» .odt«)</li> </ul>
24. Jul 2007	7.5	vrws	<ul style="list-style-type: none"> <li>● additional file output for posted files to determine which papers have to be withdrawn</li> <li>● corrections for »&amp;#322;« (polish l-slash = ł) and »&amp;#380;« (z-dot = ź)</li> </ul>
02. Aug 2007	7.6	vrws	<ul style="list-style-type: none"> <li>● changes to the footer section due to IEEE requirements, main- and subclassification on top of IEEE copyright notice, page number outside instead of centered</li> <li>● 'List of Sessions' changed to 'Table of Sessions'</li> <li>● button 'Home' in »BANNER.HTM« changed from »\$base_url« to »./INDEX.HTM«</li> </ul>
26. Aug 2007	7.7	vrws	<ul style="list-style-type: none"> <li>● T<sub>E</sub>X file generated for InDiCo produces an error (no line to end here) when Main- and Subclassifications are empty, now \mbox{ } introduced when strings are empty.</li> </ul>
18. Sep 2007	7.8	vrws	<ul style="list-style-type: none"> <li>● due to changes to the XML by Matt, the check now is »Primary Author« instead of »Author«, This has to be added, otherwise InDiCo-Main Authors are not found anymore</li> </ul>
23. Sep 2007	8.0	vrws	<ul style="list-style-type: none"> <li>● error in primary author high-lighting found and corrected. Only the authors index showed a correct high-lighting, session, keyword, and classification didn't, this error showed up when Matt changed the sequence in which »Co-Author«, »Primary Author«, »Owner« and »Speaker« are output in the XML.</li> <li>● checking whether a poster file (upload only possible under »&lt;file_type abbrev="OTHER"&gt;Other Supporting Files&lt;/file_type&gt;«) with a name obeying the following rule »&lt;paper_code&gt;_poster.PDF«) has been uploaded (or more correctly: downloaded into the »./POSTERS« directory).</li> <li>● file download with »pdfwget.bat« made safe for file names containing spaces</li> <li>● optional argument switch introduced with »Getopt:Long«, at the moment only an alternative XML file location is implemented using »--xml=&lt;file-spec&gt;«.</li> <li>● major rework</li> <li>● discrepancy between »sound« and »audio« directory and treatment adjusted</li> <li>● write to file »pdfwget.bat« now selects only »&lt;paper_code&gt;&lt;extent&gt;.PDF« files where extent can be empty, »_talk« or »_poster«. So now only directly usable files are download. The file »allwget.bat« gets all from the server downloadable files. The batch file now copies the files into the corresponding directories defined by »conference.config« (raw_paper_directory, slides_directory, poster_directory).</li> </ul>
7. Oct 2007	8.0a	vrws	<ul style="list-style-type: none"> <li>● check for changes made to # why \$clsMline="" and \$clsSline=" " ???</li> </ul>
14. Oct 2007	8.0b	vrws	<ul style="list-style-type: none"> <li>● out of a sudden <i>en-dash</i> (&amp;#150;) causes problems in T<sub>E</sub>X. Reconversion not OK due to wrong placement of 1 byte/2 byte and 3 byte UTF-8 character sequences. Substitutions reordered.</li> </ul>
14. Jan 2008	8.1	vrws	<ul style="list-style-type: none"> <li>● sort order for main authors has been changed by Matt to last entity in sequence (<b>why?</b>), attempt to re-sort main author to first entry</li> </ul>
27. Feb 2008	8.2	vrws	<ul style="list-style-type: none"> <li>● new version id introduced to identify html pages by \$sc_version of spms_batch.pl script</li> </ul>
1. Mar 2008	8.20	vrws	<ul style="list-style-type: none"> <li>● some code for L<sup>A</sup>T<sub>E</sub>X proceedings index and institute generation corrected</li> </ul>
15. May 2008	8.2a	vrws	<ul style="list-style-type: none"> <li>● code now less greedy to produce superscripts from numbers with embedded tens, like ZIP codes etc.</li> </ul>
23. May 2008	8.2b	vrws	<ul style="list-style-type: none"> <li>● for consistency all character code with &amp;#0xxx were changed to &amp;#xxx without leading zero</li> </ul>
30. Jun 2008	8.2c	vrws	<ul style="list-style-type: none"> <li>● Perl function uc (for Uppercase) for filenames changed to lc (decision taken at Team Meeting in Knoxville, Oct 07). See EditKey #U#</li> </ul>
10. Aug 2008	8.2d	vrws	<ul style="list-style-type: none"> <li>● added full support for \$img_directory which was introduced last year but never used</li> </ul>
15. Aug 2008	9.0	vrws	<ul style="list-style-type: none"> <li>● finished extensions for generating SPIRES records directly</li> </ul>
23. Aug 2008	9.0a	vrws	<ul style="list-style-type: none"> <li>● error in T<sub>E</sub>X α (\alpha) corrected, "+" added</li> </ul>
28. Aug 2008	9.1	vrws	<ul style="list-style-type: none"> <li>● fixed problems in session name with "/" (which requests a subdirectory) – this occurs in InDiCo (ERL07)</li> </ul>

## 9.5 JPSP

Changes			
Date	Version	Name	Comment
May 06	2.0	VRW Schaa	<ul style="list-style-type: none"> <li>new version: revive old T<sub>E</sub>X version which ended in 2005 leaving only fragments of code. Now incorporating several handwritten notes</li> </ul>
June 06	2.1	VRW Schaa	<ul style="list-style-type: none"> <li>completely new and updated version (added: Autorun.inf, files delivered with script, Production of abstract booklet, etc.)</li> </ul>
12. Jun 2006	2.1f	vrws	<ul style="list-style-type: none"> <li>...</li> </ul>
17. Jun 2006	2.1g	vrws	<ul style="list-style-type: none"> <li>Instructions added how to download and install a ConT<sub>E</sub>Xt stand-alone distribution (»CONTEXT minimal installation«)</li> </ul>
25. Jun 2006	2.1h	vrws	<ul style="list-style-type: none"> <li>John Poole had problems running texexec; finally found that »Ruby« has to be installed. Installation description for »Ruby« added.</li> </ul>
29. Jun 2006	2.1j	vrws	<ul style="list-style-type: none"> <li>tests revealed that the template file »keyword-count.txt« was missing from »./paper-finals/« and therefore the script »spmsbatch« failed to complete successfully. File now added to SCS2006.</li> </ul>
12. Jul 2006	4.1j	vrws	<ul style="list-style-type: none"> <li>changed version number to get in synch with Matt's versioning of the »Proceedings Scripts« on <a href="http://www-esh.fnal.gov/SPMS/">http://www-esh.fnal.gov/SPMS/</a>.</li> </ul>
23. Jul 2006	4.2	vrws	<ul style="list-style-type: none"> <li>Additions due to comments from Michael Abo-Bakr (Perl installation as non privileged user, WinEdt trial period, documentation for cURL deleted, error message from spmsbatch.pl)</li> <li>documentation adapted to changed version of »pagecheck.pl«</li> <li>L<sup>A</sup>T<sub>E</sub>X description for use of special characters in Abstracts embedded and adapted (errors in script corrected)</li> </ul>
30. Jul 2006	4.2a	vrws	<ul style="list-style-type: none"> <li>got the original JACoW logo from John</li> <li>L<sup>A</sup>T<sub>E</sub>X description for use of list environments corrected</li> </ul>
2. Aug 2006	4.2b	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl«</li> <li>more L<sup>A</sup>T<sub>E</sub>X commands described which are converted (PNP12 conference)</li> </ul>
12. Aug 2006	4.2c	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.5.8) (»pdftot« destroys some of the PDF files (error 110). The code is commented out now</li> </ul>
16. Aug 2006	4.2d	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.5.9) featuring 'no links' to missing papers in \$paper_directory.</li> </ul>
15. Sep 2006	4.2e	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.5.10)</li> <li>graphics and other included files moved to subdirectory »graphics-includes/«</li> </ul>
28. Sep 2006	4.3	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.5.11)</li> <li>reconstructed version (after disk crash) with GPL sources in PDF</li> <li>new version of conference reference file (now »SCS2007«)</li> </ul>
16. Mar 2007	4.4	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.6.4)</li> <li>Update of required software versions</li> <li>small update to production run sequence</li> </ul>
21. Sep 2007	4.9	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.7.8)</li> <li>new version of conference reference file (now »SCS2008«)</li> <li>John's Library Data chapter</li> </ul>
23. Sep 2007	5.0	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.7.9)</li> <li>complete update of JPSP manual</li> </ul>
14. Jan 2008	6.0	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.8.1)</li> <li>update of JPSP manual in parts</li> </ul>
27. Feb 2008	7.0	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.8.2)</li> <li>update of JPSP manual in parts</li> </ul>
15. Aug 2008	8.0	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.9.0)</li> </ul>
20. Oct 2008	9.0	vrws	<ul style="list-style-type: none"> <li>new version of »spmsbatch.pl« (v.9.1)</li> <li>complete update of JPSP manual</li> <li>new version of conference reference file (now »SCS2009«)</li> </ul>

## 10 GNU General Public License

```
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The source files for the documentation are included this zip file ([JPSP-manual.zip](#))