

# Some Announcements from Usenet\*

(edited by Gerard van Nes)

## 1 Partial Font Downloading utility for PostScript files<sup>1</sup>

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I have uploaded into CTAN upgrade of the 'Partial Font Downloading utility'. It is in directory:

`/tex-archive/fonts/utilities/fontload`

This utility parses a PostScript file (by GhostScript program), determines fonts and characters which are used in it and loads required ATM compatible Type 1 PostScript fonts. Fonts are partially downloaded into file, i.e. only those characters which are really required for document printing.

This utility was tested with PostScript files written by:

1. Rokicki's DVIPS;
2. Frame Products (under UNIX);
3. MS-Windows PostScript printer driver.

Job of this utility is similar to Partial font downloading facility of the DVIPSONE program which is distributed by Y&Y. However, DVIPSONE handles DVI files but not PostScript.

This utility automatically handles picture fonts and has no problems with mixing of the PostScript output from different systems. Of course, this works slower than DVIPSONE because of PostScript file parsing.

This utility works in UNIX, VMS and IBM-PC/MSDOS. To operate it requires GhostScript version 2.6.1 (recommended) or GS 3.12.

The current version has following differences with previous version issued 28-Nov-94.

1. It generates more compact code to download font into printer, that reduces output file size and printer downloading time.
2. Printer memory requirements is also slightly reduced.
3. Ported to other platforms, such that it works now on UNIX, MS-DOS, VMS.
4. Improved control of the error situations.
5. Added option `-p` that selects font set which is built in printer.

6. Solved disadvantage with those fonts which have common CharStrings (for example Univers fonts).
7. Made the same font map for GhostScript and SubFont program.
8. Tested with GhostScript 3.12, that is able to apply partial font downloading to document used Multiple Master fonts. *However*, GS 3.12 has a bugs, for this reason GS 2.6.1 using is recommended.
9. Man pages for `flload` and `subfont` are added.

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## 2 URL search for CTAN <ftp://ftp.SHSU.edu/search.html>

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*March 8th, 1995*

A README file containing some documentation for a new feature at the `ftp.shsu.edu` anonymous ftp archives (North American home of the CTAN)<sup>2</sup>. For inquiring minds, the URL for the 'search.html' file being referred to is

`ftp://ftp.shsu.edu/search.html`

I will be in contact with the other CTAN sites to see if they are interested in putting this on their nodes.

The file 'search.html' is a Hypertext Markup Language shell which is designed to provide the interactive functionality of the popular and widely-used anonymous ftp `quote site index` command (see `README.site-commands` and `README.archive-features`) to users of forms-capable World Wide Web browsers. Upon selecting this file with an appropriate browser, the user is prompted for a string to search for within the master index of files (INDEX in the top-level directory) archived in the Sam Houston State University anonymous ftp archives on `ftp.SHSU.edu`. This is not a WAIS-based or index-based search; instead, it is a more or less standard 'grep' search of that file. Thus, the search string provided may include grep-type special characters, if desired.

Two special distinctions are provided in `search.html` as compared to the anonymous ftp 'quote site index' command. First, rather than limiting the search results to the first 20 matches within the INDEX (a feature specifically

\*In this contribution you will find some software announcements gathered by your editor. Do you find any interesting new or updated product on any discussion list? Please contact him!

<sup>1</sup>Available on the 4allTeX CD-ROM and implemented within 4TeX!

<sup>2</sup>CTAN = Comprehensive TeX Archive Network, sites which you can use anonymous ftp to obtain TeX/LaTeX-related material from. CTAN is the 'home' of the official version of LaTeX etc. CTAN sites are: `ftp.dante.de`, `ftp.tex.ac.uk` and `pip.shsu.edu`

designed into ‘quote site index’ for anonymous ftp to try and keep the search results on a single screen), all matches are returned to the user. Second, all file and directory names which are returned as matches to the request are automatically converted to HTML links to those files. Therefore, all matches within the archive can be found and immediately clicked on to retrieve the file or go to the directory desired. In addition to the active link, the usual ‘quote site index’ information — file size, archival date, and path-to-file — is included; the path information is simply ‘hot’.

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### 3 March 95 release of DECUS T<sub>E</sub>X (OpenVMS)

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 March 9th, 1995

Hello VMS TeX users!

I want to announce the new March95 release of DECUS T<sub>E</sub>X for OpenVMS.

The new release consists of some documentation files (names starting with "0...") and a bunch of ZIP archives. It can be found in the subdirectory tree starting with  
 /tex-archive/systems/vms/  
 on the CTAN archive sites and their mirrors.

DECUS T<sub>E</sub>X for OpenVMS provides a full featured T<sub>E</sub>X system on VAX and Alpha AXP computers running the current OpenVMS 6.1. The previous OS releases (VMS 5.5 on VAX and OpenVMS 1.5 on AXP) should work, too.

Some highlights of the new release:

- Now, all programs of the Knuth core distribution are supported, even the ‘obsolete’ .PXL file utilities:
  - added patgen
  - added mft
  - added pktogf, gftopxl, pktopx, pxtopk, vftovp, vptovf
- Bugfixes in
  - tangle (important, use this new release to recompile other T<sub>E</sub>X/METAFont sources)
  - vfware programs
  - T<sub>E</sub>X and METAFont command line interface
- Updated DVIPS to version 5.58
- Now, METAFont is BigMETAFont(262142 words main memory)
- All ‘core programs’ (Web, T<sub>E</sub>X, METAFont, BibT<sub>E</sub>X, T<sub>E</sub>X/METAFont/VFware) support wildcards in input file name specifications. This allows: *automatic single/multilevel subdirectory searching!!!*
- In the ‘large’ programs (T<sub>E</sub>X, METAFont, BibT<sub>E</sub>X) that use the VMS CLI system utility for command line parsing, a default command table is now included in

the executable. This allows installing these programs as ‘foreign commands’.

- The command line interface of the utility programs has been enhanced:
  - They use more useful defaults when (parts of the) arguments are missing.
  - The command line supports multiple arguments for those programs where this makes sense, to allow specification of input and output files on the command line.

For more information, please see the 0\* files.

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### 4 Release version of PSfrag for L<sup>A</sup>T<sub>E</sub>X2<sub>ε</sub>

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 March 16th, 1995

The release version of PSfrag for L<sup>A</sup>T<sub>E</sub>X2<sub>ε</sub> can be found at CTAN sites in the directory:  
 macros/latex/contrib/supported/psfrag

#### 4.1 What is PSfrag?

Many drawing and graphics packages produce output in PostScript, but do not support the inclusion of equations and other scientific text of which L<sup>A</sup>T<sub>E</sub>X is capable. Likewise, many L<sup>A</sup>T<sub>E</sub>X users simply find the various L<sup>A</sup>T<sub>E</sub>X graphics packages too clumsy, and prefer the familiar GUI of a PostScript-generating graphics tool.

PSfrag provides the best of both worlds, by allowing the user to replace arbitrary text in Encapsulated PostScript files with arbitrary L<sup>A</sup>T<sub>E</sub>X constructions. One can place a simple text ‘anchor’ in the graphics file to denote the position of a desired L<sup>A</sup>T<sub>E</sub>X equation (for example), and PSfrag will automatically remove that anchor and replace it with the properly sized, aligned, and rotated L<sup>A</sup>T<sub>E</sub>X equation.

The full documentation for PSfrag found in the release contains examples and usage instructions.

#### 4.2 To use PSfrag

You will need:

- L<sup>A</sup>T<sub>E</sub>X2<sub>ε</sub> and the ‘graphics’ package.
- Any dvips driver which supports the `\special{ps: }` command for inserting raw PostScript code. The package has been tested only on the ‘dvips’ PostScript driver (courtesy Tom Rokicki).

If you have another driver, and can patch PSfrag to work with it, please let me have the patch! I’ll try to work it into the code. This should not be difficult if your driver works well with graphics.sty; in fact, in the future, all compatibility issues will be determined solely in graphics.sty.

- Perl 4.036 or later.
- The Ghostscript PostScript interpreter.

These last two programs are only necessary if you wish to process new figures for use by PSfrag. If you only wish to run  $\LaTeX$  on documents whose figures have *already* been processed, then Perl and GhostScript are not necessary.

### 4.3 (Important) changes from $\LaTeX$ 2.09 PSfrag

This is a major release of PSfrag, and its operation has changed as much as  $\LaTeX$  itself has of late.

- As past users of PSfrag are aware, the PSfrag system must first process each Encapsulated PostScript file to determine the position and rotation of each piece of text in the figure. In  $\LaTeX$ 2 $\epsilon$ , this information is stored *in the original PostScript file* as a set of additional Document Structuring Comments. Before PSfrag 2.0, this information was stored in a separate file. These comments have NO effect on the original PostScript file. (PSfrag 2.0 does, however, have the ability to read old-style PSfrag info files, for back-compatibility purposes.)
- A new alignment mode, ‘B’ (baseline), has been added. This causes the alignment point to occur at the baseline of the text instead of at the true bottom of the bounding box. The default alignment has been changed from ‘bl’ to ‘B’.
- Since  $\LaTeX$ 2 $\epsilon$  does not support dvips’ `epsf.sty` macros, (although they do happen to work), PSfrag 2.0 has been designed around the ‘graphics’ package instead. Therefore, you must either include the PostScript figures with `\includegraphics`, or use the `epsf.sty` wrapper provided with PSfrag 2.0 (or any other wrapper, for that matter). The `epsf.sty` package should provide seamless back-compatibility with your old documents, too.
- The scaling and resizing operators in `graphics.sty` will scale the PSfrag text as well. To prevent this from happening (i.e., to maintain the old behavior), use the key-value sizing commands of `graphicx.sty`, or use the  $\LaTeX$ 2 $\epsilon$ -ified `epsf.sty` or `epsfig.sty`.

### 4.4 Changes from the beta release

PSfrag 2.0 has undergone beta testing, and as a result a few changes have been made:

1. Numerous bug fixes.
2. Support for both methods of naming  $\LaTeX$  2.09-style `*frag` files is supported: `example.eps`  $\rightarrow$  `example.epsfrag`, and `example.eps`  $\rightarrow$  `example.frag`. If you are running on UNIX, it will always look for both (in the above order). Of course, this is irrelevant in  $\LaTeX$ 2 $\epsilon$  mode.
3. The `ps2frag` script now handles both  $\LaTeX$ 2.09 and  $\LaTeX$ 2 $\epsilon$  modes. In other words, it will generate ‘\*frag’ files for your figures if you specify the ‘-209’ option; so it can completely replace the  $\LaTeX$ -209 script.
4. The package option ‘209files’ has been changed to ‘209mode’.
5. A complementary option, ‘2emode’, has been provided when  $\LaTeX$ 2 $\epsilon$  is run in 2.09 compatibility mode, which allows documents which must remain in 2.09 style

for other reasons to access the full functionality of  $\LaTeX$ 2 $\epsilon$ ’s PSfrag (the resulting documents may only be processed by  $\LaTeX$ 2 $\epsilon$ , however).

6. `ps2frag.ps` has been included in `psfrag.dtx`, so it can be documented more completely.
7. the documentation has been broken out into a separate file. `psfrag.dtx` still contains the commented code, but the users guide is now in `pfguide.tex,ps`.

### 4.5 Bugs? What Bugs?

PSfrag 2.0 has undergone a beta test, and I have personally used it on a significant number of figures. Its backwards compatibility mode has undergone testing as well. This is not a commercial package, so you can expect it to be bug-free. Just kidding!

If you have problems, bug reports, or improvement suggestions, please send them to the PSfrag maintainer’s mailing list,

`psfrag@rascals.stanford.edu`

You may be asked to supply examples to demonstrate the behavior you wish to have corrected or improved.

This is a majordomo mailing list; feel free to join if you would like to actively participate in PSfrag development. It is not a general user’s list; if demand is high, however, one can be created.

Thanks for using PSfrag!

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## 5 $\LaTeX$ package for writing chemical symbols

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*26 Apr 1995*

Now there is a package for  $\LaTeX$ 2 $\epsilon$  available at CTAN which simplifies in writing chemical texts. The package’s name is ‘chemsym’, from ‘CHEMical SYMBols’.

The package defines commands for the chemical symbols of the elements, which always are type-set in upright font, as they should. If not followed by a subscript, superscript, ‘(’, or ‘)’, a small space is inserted. The package also makes the  $\TeX$ / $\LaTeX$  commands ‘ $\hat{\phantom{x}}$ ’ and ‘ $\_$ ’ possible to use in text mode, to facilitate typing chemical formulas and superscripts to units.

The package can be obtained from CTAN (\*) in the directory

`/tex-archive/macros/latex/contrib/  
supported/chemsym`