

My Way

May 22, 2003

A Beginner's Adventures with T_EXFONT
Adam Lindsay
Lancaster University

I tried to install T_EXFONT versions of my fonts from T_EXLIVE. It was harder than expected, but it turned out okay. I describe a few "gotchas" that are not obvious from the docs or other hints currently available.

1 Introduction

Prompted by a brief email from Hans Hagen, I decided to spend a weekend getting familiar with T_EXFONT. The carrot dangled was the ability to use the fonts in T_EXLIVE the ConT_EXt way, and as a side effect, use the new magazine module without any changes.

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btw, i always put my extra fonts on texmf-fonts ; the free fontson
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can be installed using:
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```
texfont type-tmf.dat --en=texnansi
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which should run out of the box (check your tex live files first, you may need to ‘‘gzip -d’’ the afm files beforehand!)

2 Getting Started

Sounded easy. I was able to handle that, I thought. I ended up discovering a lot more about ConT_EXt over the course of the weekend. The first set of commands were easy:

```
cd $texmf/fonts/afm
sudo gunzip -r *
sudo texhash
```

That prepared the font metric files to be used in T_EXFONT. I also needed a minor adjustment in one of the paths...as shipped with T_EXLIVE v.7, its usage wasn't consistent:

```
cd $texmf/fonts/afm
sudo mv bit bitstrea
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I started running T_EXFONT on the fonts in my main TEXMF tree, with the fonts hopefully created in my TEXMF-local tree. (The machines I administer are mostly single-user setups, and since I was working with free fonts, licensing issues were minimal.) I was running into a lot of difficulty running the batch file, especially with finding the paths to the fonts. I also had trouble successfully running the type sample file (e.g., with the `--show` option or running `texexec --pdf --once texnansi-urw-helvetica`).

3 Breaking through

The second problem was solved in another visit to Bill McClain's ever-useful page¹. Using these maps requires that the line in `cont-sys.tex` that says `\autoloadmapfiletrue` is uncommented. Once I did that, the font previews ran well.

The first problem took a bit more effort. The big mystery was why should individual runs of T_EXFONT such as...

```
sudo texfont --en=texnansi --fontroot=/usr/local/teTeX/texmf-local
--install --makepath --ve=public --co=antp --so=auto --show
```

...work without problem, but any time I ran the batch file, there would be path errors. I experimented and finally concluded that T_EXFONT expected the source (`--sourcepath`) files and the destination files (`--fontroot`) to be in the *same* tree.

Taking the unsubtle approach, I copied my whole font directory into my TEXMF-local hierarchy, after making that whole directory writeable:

```
cd /usr/local/teTeX
sudo chown -R me:admin texmf-local
chmod -R g+w texmf-local
cp -R /usr/local/teTeX/texmf/fonts /usr/local/teTeX/texmf-local
```

One hundred seventy megabytes later, I was ready to go. I switched to my home directory and was able to run the following successfully:

```
texfont /usr/local/teTeX/texmf/context/data/type-tmf.dat --en=texnansi
--fontroot=/usr/local/teTeX/texmf-local --install --makepath
```

T_EXFONT was finally happily churning away, installing T_EXLIVE fonts that were used in the ConT_EXt distribution, especially the `texnansi-urw-palatino` used in `s-mag-01` and `x-sch-01`.

4 Trouble in paradise

With the fonts properly installed, I found some issues. The `\autoloadmapfiletrue` directive in `cont-sys` was slowing everything down. My current client is really thrown off by the excessive warnings it generates, and the terminal slows down to a crawl when running anything. Weird. It's not really a ConT_EXt issue, but I do wonder if there is something between no map files auto loaded, and *all* of them loaded.

¹ <http://home.salamander.com/~wmccclain/context-help.html>

I also noticed that T_EXFONT struggles a little with unusual font variations, such as Oblique, Book, and DemiBold. It finds the fonts (like Avant Garde Demibold Oblique [uagdo8a]) correctly, but not before making false starts, looking for Bold Italic [uagbi8a] first. These wrong versions are preserved in the sample file (texnansi-urw-avantgar.tex), which makes it a bit confusing for naïve people like me, who want to cut and paste the code snippets in those files into their typescripts. It's a minor issue, but still a stumbling-block.

Paragraph's attractive Literaturanaya font has its glyphs scattered throughout several font files per variation, but there is an interesting virtual font that collects them all into a nice ec-encoded font. As it stands, T_EXFONT doesn't seem to give that level of support for that particular font.

5 Some other fonts from T_EXLIVE

In trying the system out, I added a few other fonts from T_EXLIVE that I knew about. They're added here in case someone else wants to explore.

```
# You can process this file as follows, using texfont.pl:
#
# texfont --encoding=ec --batch type-tmf-more.dat
#
# where 'ec' can be replaced by 'texnansi', '8r' or otherwise.

# urw avantgarde
--en=? --ve=urw --co=avantgar --so=auto
--en=? --ve=urw --co=avantgar --so=auto --ca=* uagk8a
--en=? --ve=urw --co=avantgar --so=auto --extend=0.8 uagk8a
--en=? --ve=urw --co=avantgar --so=auto --extend=0.8 uagko8a
--en=? --ve=urw --co=avantgar --so=auto --extend=0.8 uagko8a
--en=? --ve=urw --co=avantgar --so=auto --extend=0.8 uagd8a
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--en=? --ve=urw --co=avantgar --so=auto --extend=0.64 --ca=* uagk8a

# urw newcentury
--en=? --ve=urw --co=ncntrsbk --so=auto
--en=? --ve=urw --co=ncntrsbk --so=auto --ca=* uncr8a
--en=? --ve=urw --co=ncntrsbk --so=auto --sl=* uncr8a
--en=? --ve=urw --co=ncntrsbk --so=auto --sl=* uncb8a
```

```

# paragraph literaturanaya
--en=? --ve=paragrap --co=literat --so=auto
--en=? --ve=paragrap --co=literat --so=auto --ca=* lit55_t1
--en=? --ve=paragrap --co=literat --so=auto --sl=* lit55_t1
--en=? --ve=paragrap --co=literat --so=auto --sl=* lit75_t1

# public brushscript
--en=? --ve=public --co=brushscr --so=auto

# public augie
--en=? --ve=public --co=augie --so=auto
--en=? --ve=public --co=augie --so=auto --ca=0.7 augie___

# bluesky cmtt
--en=? --ve=bluesky --co=cm --so=auto --extend=0.8 cmtt12

# urw courier
--en=? --ve=urw --co=courier --so=auto --extend=0.8 ucrb8a
--en=? --ve=urw --co=courier --so=auto --extend=0.8 ucrr8a
--en=? --ve=urw --co=courier --so=auto --extend=0.8 ucrr8a
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```

6 Conclusion

So will I use the verbose T_EXFONT naming scheme in ConT_EXt? Not everyday, yet. The biggest problem is the performance in my chosen client. I'll work on that² The biggest stumbling-block for a beginner is realising that the source and destination font trees are not really allowed to be different when in batch mode. This is especially confusing when options exist to copy fonts and to make paths. I think it could be remedied with another option in the PERL script.

On the other hand, I really like the flexibility that the new, generated fonts give me (like a condensed mono-spaced font). I also enjoy the fact that this 'unlocks' new functionality in some of ConT_EXt's pre-packaged typescripts. I realise that I re-invented the wheel when making some of my earlier typescripts. It's all part of the long-but-gentle learning curve in ConT_EXt.

² I did work on it: I finally managed to turn off the syntax coloration in the terminal, and got an approximately 9× speed boost. Dramatic.

7 Postscript

I wrote this in a weekend (3 Feb 2003), intending to revise it and smooth down the somewhat cranky tone. I have since come to terms with T_EXFONT as probably the best option for font installation for ConT_EXt users.

source code of this document

```
% since I took the \autoloadmapfilestrue option out of cont-sys, I
invoke it here.
\autoloadmapfilestrue
\usemodule[mag-01]
\usemodule[abr-03]

\setvariables
[magazine]
[title={A Beginner's Adventures with \TEXFONT},
author=Adam Lindsay,
affiliation=Lancaster University,
number=0]

\startbuffer[abstract]
I tried to install \TEXFONT\ versions of my fonts from \TEXLIVE. It
was
harder than expected, but it turned out okay. I describe a few ‘gotchas’
that are not obvious from the docs or other hints currently available.
\stopbuffer

\starttext \setups [titlepage] \setups [title]
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Prompted by a brief email from Hans Hagen, I decided to spend a
weekend getting familiar with \TEXFONT. The carrot dangled was the
ability to use the fonts in \TEXLIVE\ the \CONTEXT\ way, and as a
side effect, use the new magazine module without any changes.

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Using these maps requires that the line in `\type{cont-sys.tex}` that says `\type{\autoloadmapfiletrue}` is uncommented.

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```

```
\setups [listing] \setups [lastpage] \stoptext
```

