The Font Management with the OFS
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Abstract

The widely used New Font Selection System (NFSS) has its pros and cons. To have uniform platform for large font set management and selection for both plain and \LaTeX users, and to extend the possibilities of the NFSS, an Olšák’s Font System (OFS) has been designed and implemented.

The user interface of this macro is the same for plain and \LaTeX, with two independent implementations. First implementation is based on plain.tex macros only; the second one for \LaTeX users is implemented as an additional layer over NFSS macros, and is slightly less elaborate (support for math font families is missing).
An Outline

1. Motivation
2. Font Management Basics
3. Font Management—Status Quo
4. OFS Historical Notes, Versions
5. List of Main Features
6. Choose and Define a Font with OFS
7. OFS Declaration Files
8. Specifics of OFS for plain\TeX\ and \LaTeX
9. Summary
10. Future Work
Motivation

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From: Rodolfo Medina <romeomedina@libero.it>
To: <tug-support@tug.org>
Date: Tue, 10 Jun 2003 16:34:52 +0200
Subject: [texhax] Font tables with plain TeX

Hi, everyone.

I’m a quite new plain TeX user. I have difficulties every time I have to use a new font because you need to know the ‘’code’’ name of the font (sorry for this not proper expression): for example, pagk7t for avantgarde, cmcsc10 for caps and small caps, cmmi10 for italics, etcetera. Then you type, for example,

\font\nineavantgarde=pagk7t at 9pt
in the file.tex and go on. But when you don’t know that the
’’code’’ name for avantgarde is pagk7t or something else,
what on earth can you do?
So: where is it possible to find large collections of font tables
like the ones that are on pages 427--432 of the TeXbook
(or on pages 31--34 of the file amsfndoc.ps)?
I insist upon the fact that the ’’code’’ name should be shown,
and this way, with both the table and the code
the user would easily be able to choose and use his favourite fonts.
My searching in the web did not have any good result.
(Or maybe there are other ways to load fonts?...)

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Almost every plain\TeX user writes his own font macros, so why Petr Olšák not to join the club :-)?
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Font management support should interface with font installation tools (in \TeX{} distributions cumbersome).
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OFS (Olšák’s Font System), extensible set of font selection and cataloging macros for both plain\TeX{} and \LaTeX{} users.
OFS—Historical Notes

At the beginning
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\usepackage{times} solution inconvenient, font cataloging macros ("local font guide") a necessity.
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OFS macro written for plain\TeX: \input ofs [fonts, collections]
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\begin{verbatim}
Lately, independent implementation for \LaTeX users, based on NFSS, with the same user interface:
\end{verbatim}

\begin{verbatim}
\usepackage [fonts, collections] {ofs}
\end{verbatim}
List of Main Features

The OFS defines declarative language to define the mapping from the original full names of fonts to the tfm names (in plain) or to NFSS short names of the font families (in \LaTeX). The user does not need to remember the short 8.3 names of tfm files and/or the short names of NFSS font families. This allows for user-defined logical font markup: one can use the real font (foundry) names from font (catalog).
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☞ Font mapping declarations are structured into fonts collections (e.g. a35.tex/sty defining family names of standard 35 PostScript fonts).

☞ Suggested root collection file with the name allfonts.tex/sty.
One can choose the TeX internal encoding of fonts for your language not only at the beginning of your document. This feature is commonly used for Czech and Slovak languages: there are TeX fonts which encode the alphabets of these languages by Cork (T1 encoding) or by ISO-8859-2 (IL2 encoding), or even others.
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The user of the OFS can use a font separated into two \TeX\ metrics (basic and extended tfm). The font is from the user perspective seen as one font only. The mapping works even for fonts with more than 256 characters (if one does not want to kern between all characters): typical fonts by Štorm foundry have about 350 characters.
Choosing and Defining Fonts with OFS: 
\texttt{\setfonts} and \\texttt{\fontdef} commands

Font family change only: \texttt{\setfonts [JannonText/]}
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Relative size change only:
\texttt{\def\LaTeX{L\kern-.2em\raise.45\hbox{\setfonts[/mag.7] A}\kern-.05em\TeX}};
useful when using fonts from different font families with different ex height.
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\texttt{\textbackslash fontdef\name [Family-vr/size]} defines font switching command without knowing explicit font metric name.
Specifics of OFS for plain TeX

\setmath [size/size/size]
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font tracing commands demo
Different implementation, a layer over NFSS.
OFS for \LaTeX

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A TEX macropackage that helps designer to handle and manipulate big font collections with the same user interface for plainTEX and \LaTeX{} has been developed and is in use by \$\$TUG users since 2001. demo show
Summary

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- Primary download site: \texttt{http://www.olsak.net/of\textbackslash s.html},
Possible Future Work

“The road to wisdom? Well it’s plain and simple to express: Err and err and err again, but less and less and less.”

Piet Hein

pdfTEX’s font shrinking and stretching support.
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- pdf\TeX’s font shrinking and stretching support.

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“We are all apprentices in a craft where no-one ever becomes a master.”

Ernest Hemingway

Thank you for your attention. Questions?