

The xltextra package

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I Introduction

This document describes the xltextra package. It implements in general improved functionality for broken or sub-standard L^AT_EX methods when using the X_EL^AT_EX format.

Documentation is slim, since new features per se are slim.

File I

The xltextra package

This is the package.

```
1 \unless\ifdefined\XeTeXversion
2 \latex@error{^^J
3 *****^^J
4 *** The xltextra package only works with XeTeX ***^^J
5 *****}
6 \fi
7 \ProvidesPackage{xltextra}
8 [2006/06/08 v0.1 Improvements for the XeTeX/LaTeX format]
```

2 Logos

The various T_EX-like logos that extend outside the regular vertical alphabetic bounds of running text have the unfortunate side-effects in X_YT_EX of often overrunning the `\baselineskip`. Putting the logos in zero-height boxes prevents this problem.

We also provide a `\XeTeX` logo for convenience. Thanks, Jonathan.

T _E X	X _Y T _E X	L ^A T _E X	<code>\TeX\ \XeTeX\ \LaTeX\ \%</code> the default
T _E X	X _Y T _E X	L ^A T _E X	<code>\TeXlogospacing{-0.1em}{-0.1em}{0.8ex}{-0.36em}{-0.15em}</code>
TEX	X _Y TEX	L ^A TEX	<code>\TeX\ \XeTeX\ \LaTeX\ \%</code>
TEX	X _Y TEX	L ^A TEX	<code>\TeXlogospacing{0em}{0em}{0ex}{-0.36em}{-0.15em}</code>
			<code>\TeX\ \XeTeX\ \LaTeX</code>

To do: adapt `\LaTeX` to use small caps if possible. Add other logos.

To do: Provide for per-font parameters and define some font-specific parameters.

```
\TeXlogospacing #1: Kern between T & E
                  #2: Kern between E & X
                  #3: Lowering amount for E
                  #4: Kerning between L & A
                  #5: Kerning between A & TeX

This macro defines new \TeX and \XeTeX logos. Parameters must be tuned on a
per-font basis. Warning! This macro will almost certainly change in the future.

9 \newcommand*\TeXlogospacing[5]{%
10   \DeclareRobustCommand\TeX{%
11     \leavevmode
12     \smash{%
13       T\kern#1
14       \lower#3\hbox{E}\kern#2 X}%
15     \spacefactor1000\relax}
16 \DeclareRobustCommand{\LaTeX}{%
17   \leavevmode
18   \smash{
19     L\kern#4%
20     {\sbox\z@ T%
21       \vbox to\ht\z@{\hbox{\check@mathfonts
22         \fontsize\sf@size\z@
23         \math@fontsfalse\selectfont
24         A}%
25       \vss}%
26     }%
27     \kern#5%
28     \TeX}}
29 \DeclareRobustCommand\XeTeX{%
30   \leavevmode
31   \smash{%
32     X\lower #3
33     \hbox{\kern #2
34       \ifnum\XeTeXcharglyph"018E > 0
35         \char"018E\relax
```

```

36      \else\ifdim\fontdimen1\font=0pt
37      \reflectbox{E}%
38      \else % rotation is about the origin, so we need to adjust positioning
39      \XeTeXuseglyphmetrics=1%
40      \setbox0=\hbox{E}\dimen0=\ht0\advance\dimen0by\dp0%
41      \raise\dimen0\hbox{\rotatebox{180}{\box0}}%
42      \fi\fi
43      }\kern#1\TeX}}
44 \TeXlogspacing{-0.15em}{-0.15em}{0.5ex}{-0.36em}{-0.15em}

```

3 ε -T_EX functionality

Because it's just sensible, we load the package that actually allows L^AT_EX to access the extra registers, etc., provided by ε -T_EX.

```

45 \RequirePackage{etex}

```

4 Unicode footnote symbols

L^AT_EX defines footnote symbols with LICRs that don't resolve well with the xunicode package; better results can be achieved by using specific unicode characters.

This problem is solved by the fixltx2e package.

```

46 \RequirePackage{fixltx2e}[2006/03/24]

```

5 Programmming bits and pieces

Thanks to a long-ago c.t.t. post by Robin Fairbairns for the code how to \let a robust macro.

```

47 \newcommand*\robust@let@nc[2]{%
48   \expandafter\let\expandafter#1\csname #2 \endcsname}

```

6 \-

L^AT_EX defines the macro \- to insert discretionary hyphenation points. However, it is hard-coded to use the hyphen - character. Since fontspec makes it easy to change the hyphenation character on a per font basis, it would be nice if \- adjusted automatically.

\- This macro is courtesy of Frank Mittelbach and the L^AT_EX 2_ε source code.

```

49 %\CheckCommand\-\{\discretionary{-}{-}{-}}
50 \DeclareRobustCommand\-\{%
51   \discretionary{%
52     \char\ifnum\hyphenchar\font<\z@
53       \xlx@defaultthyphenchar
54     \else
55       \hyphenchar\font
56     \fi}{-}{-}}
57 \def\xlx@defaultthyphenchar{\-}

```

7 `\textsuperscript` and `\textsubscript`

The new macros now allow real text inferiors and superiors:

```
\textsuperscript abcdefghijklmnopqrstuvwxyz1234567890
\textsubscript abcdefghijklmnopqrstuvwxyz1234567890
```

As opposed to fake ones:

```
\textsuperscript* abcdefghijklmnopqrstuvwxyz123456789o
\textsubscript* abcdefghijklmnopqrstuvwxyz123456789o
```

Or:

```
\faketextsuperscript abcdefghijklmnopqrstuvwxyz123456789o
\faketextsubscript abcdefghijklmnopqrstuvwxyz123456789o
```

But beware fonts lacking the full repertoire: (this is Adobe Jenson Pro)

```
\textsuperscript abcdefghijklmnopqrstuvwxyz1234567890
\textsubscript abcdefghijklmnopqrstuvwxyz1234567890
```

For OpenType fonts, the subscript feature (`subs`) is used, but if that doesn't exist then the scientific inferior feature (`sinf`) is used on the assumption that something's better than nothing. This assumption may prove to be a poor one, and the functionality of the package may change in the future.

```
\faketextsubscript The old ('fake') methods:
\faketextsuperscript 58 \robust@let@nc\faketextsubscript{textsubscript}
                    59 \robust@let@nc\faketextsuperscript{textsuperscript}
```

```
\textsubscript Text subscripts:
\textsubscript* 60 \DeclareRobustCommand*\textsubscript{%
                  61 \ifstar\faketextsubscript{\@@textsubscript}}
                  62 \newcommand\@@textsubscript[1]{%
                  63 \begingroup
                  64 \c@zf@script 1818326126\relax
                  65 \font\zf@basefont="\csname zf@family@fontdef\zf@family\endcsname" at \f@size pt
                  66 \zf@set@font@type
                  67 \ifzf@atsui
                  68 \zf@make@aat@feature@string{10}{2}%
                  69 \unless\ifx\zf@thisfontfeature\@empty
                  70 {\addfontfeature{VerticalPosition=Inferior}#1}%
                  71 \else
                  72 \faketextsubscript{#1}%
                  73 \fi
                  74 \fi
                  75 \ifzf@icu
                  76 \zf@check@ot@feat{+subs}%
                  77 \if@tempwa
                  78 {\addfontfeature{VerticalPosition=Inferior}#1}%
                  79 \else
                  80 \zf@check@ot@feat{+sinf}%
```

```

81      \if@tempswa
82      {\addfontfeature{VerticalPosition=ScientificInferior}#1}%
83      \else
84      \faketextsubscript{#1}%
85      \fi
86    \fi
87  \fi
88 \endgroup}

```

`\textsuperscript` Text superscripts:

```

\textsuperscript* 89 \DeclareRobustCommand*\textsuperscript{%
90   \@ifstar{\faketextsuperscript}{\@@textsuperscript}}
91 \newcommand\@@textsuperscript[1]{%
92   \begingroup
93     \c@zf@script 1818326126\relax
94     \font\zf@basefont="\csname zf@family@fontdef\zf@family\endcsname" at \f@size pt
95     \zf@set@font@type
96     \ifzf@atsui
97       \zf@make@aat@feature@string{10}{1}%
98       \unless\ifx\zf@thisfontfeature\@empty
99         {\addfontfeature{VerticalPosition=Superior}#1}%
100      \else
101        \faketextsuperscript{#1}%
102      \fi
103    \fi
104    \ifzf@icu
105      \zf@check@ot@feat{+sup}%
106      \if@tempswa
107        {\addfontfeature{VerticalPosition=Superior}#1}%
108      \else
109        \faketextsuperscript{#1}%
110      \fi
111    \fi
112  \endgroup}

```

8 `\vfrac`

A command for setting vulgar fractions based on AAT or OpenType font features. Not really recommended for many purposes, but it's a good example.

AAT: $\frac{123}{456}$
 ICU: $\frac{123}{456}$

`\fontspec{Hoefler Text}`
 AAT: `\vfrac{123}{456}\par`
`\fontspec{Warnock Pro}`
 ICU: `\vfrac{123}{456}`

`\vfrac` #1: Numerator
 #2: Denominator

No error checking is done to ensure that the font actually has the necessary features. Requires the xunicode package for `\textfractionsolidus`.

```

113 \newcommand*\vfrac[2]{%
114   \begingroup
115     \c@zf@script 1818326126\relax
116     \font\zf@basefont="\csname zf@family@fontdef\zf@family\endcsname" at \f@size pt
117     \zf@set@font@type
118     \ifzf@atsui
119       {\addfontfeature{VerticalPosition=Superior}#1}%
120       \textfactionsolidus
121       {\addfontfeature{VerticalPosition=Inferior}#2}%
122     \fi
123     \ifzf@icu
124       {\addfontfeature{VerticalPosition=Numerator}#1}%
125       \textfactionsolidus
126       {\addfontfeature{VerticalPosition=Denominator}#2}%
127     \fi
128   \endgroup}

```

Change History

vo.I

<code>\-</code> : Implemented; from the \LaTeX 2 ϵ sources.	3
<code>\faketextsubscript</code> : Implemented.	4
<code>\faketextsuperscript</code> : Implemented.	4
<code>\TeXlogspacing</code> : Implemented.	3
<code>\textsubscript</code> : Implemented.	5
<code>\textsubscript*</code> : Implemented.	5
<code>\textsuperscript</code> : Implemented.	5
<code>\textsuperscript*</code> : Implemented.	5
<code>\vfrac</code> : Implemented.	6

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