

The L^AT_EX symbol fonts for use with L^AT_EX 2_ε.^{*}

Frank Mittelbach

1998/08/17

This file is maintained by the L^AT_EX Project team.
Bug reports can be opened (category `latex`) at
<https://latex-project.org/bugs.html>.

1 Introduction

This file defines the package `latexsym` which makes the few additional characters available that come from the `lasy` fonts (L^AT_EX's symbol fonts). These fonts are not automatically included in the NFSS2/L^AT_EX 2_ε since they take up important space and aren't necessary if one makes use of the packages `amsmath` or `amssymb`.

The commands defined by the `latexsym` package are:

`\mho` \mathcal{U} `\Join` \bowtie `\Box` \square `\Diamond` \diamond `\leadsto` \leadsto
`\sqsubset` \sqsubset `\sqsupset` \sqsupset `\lhd` \triangleleft `\unlhd` \trianglelefteq `\rhd` \triangleright
`\unrhd` \trianglerighteq

2 The DOCSTRIP modules

The following modules are used in the implementation to direct DOCSTRIP in generating the external files:

<code>driver</code>	produce a documentation driver file
<code>package</code>	produce a package file
<code>fd</code>	produce a font definition file

3 The Implementation

The individual files generated from this code are identified at the very top of this file by a couple of lines looking like this:

```
%<fd>\ProvidesFile{Ulasy.fd}
%<-driver>                [????/??/?? v2.2?]
%<package>                Standard LaTeX package (lasy symbols)]
%<fd>                     LaTeX symbol font definitions]
```

```
1 (*package)
```

^{*}This file has version number v2.2e, dated 1998/08/17.

`\symlasy` It is possible to detect whether or not the \LaTeX symbols are already defined by checking for the math group number with the name `\symlasy`.

In that case we exit but write a message to the transcript file.

```
2 \ifx\symlasy\undefined \else
3   \wlog{Package latexsym: nothing to set up^^J}%
4   \endinput \fi
```

Otherwise we define the new symbol font.

```
5   \DeclareSymbolFont{lasy}{U}{lasy}{m}{n}
6   \SetSymbolFont{lasy}{bold}{U}{lasy}{b}{n}
```

Because the lasy symbols are made an error in the format we have to undefine them before we can set them anew with `\DeclareMathSymbol`.

```
7   \let\mho\undefined           \let\sqsupset\undefined
8   \let\Join\undefined          \let\lhd\undefined
9   \let\Box\undefined           \let\unlhd\undefined
10  \let\Diamond\undefined        \let\rhd\undefined
11  \let\leadsto\undefined        \let\unrhd\undefined
12  \let\sqsubset\undefined

13  \DeclareMathSymbol\mho        {\mathord}{lasy}{"30}
14  \DeclareMathSymbol\Join       {\mathrel}{lasy}{"31}
15  \DeclareMathSymbol\Box        {\mathord}{lasy}{"32}
16  \DeclareMathSymbol\Diamond    {\mathord}{lasy}{"33}
17  \DeclareMathSymbol\leadsto     {\mathrel}{lasy}{"3B}
18  \DeclareMathSymbol\sqsubset    {\mathrel}{lasy}{"3C}
19  \DeclareMathSymbol\sqsupset    {\mathrel}{lasy}{"3D}
20  \DeclareMathSymbol\lhd         {\mathbin}{lasy}{"01}
21  \DeclareMathSymbol\unlhd       {\mathbin}{lasy}{"02}
22  \DeclareMathSymbol\rhd         {\mathbin}{lasy}{"03}
23  \DeclareMathSymbol\unrhd       {\mathbin}{lasy}{"04}
```

To save some space we can remove the definition of `\not@base` since it isn't any longer needed. (We use `\@undefined` so that gives an error and not a recursive definition if it is still used somewhere.)

```
24   \let\not@base\@undefined
25 \end{package}
```

3.1 \LaTeX symbols fonts

The rest of this file defines the the font shape declarations that have to go into the corresponding `.fd` file.

```
26 \langle*fd\rangle
27 \DeclareFontFamily{U}{lasy}{}
28 \DeclareFontShape{U}{lasy}{m}{n}{
29   <10> <10.95> <12> <14.4> <17.28> <20.74> <24.88>lasy10 }{}

```

Since there are no bold lasy symbols below 10pt we silently substitute them by the medium ones to avoid terminal warnings if `\boldmath` is selected.

```
30 \DeclareFontShape{U}{lasy}{b}{n}{
31   <10> <10.95> <12> <14.4> <17.28> <20.74> <24.88>lasyb10 }{}
32 \langle/fd\rangle

```

The next line goes into all files and in addition prevents DOCSTRIP from adding any further code from the main source file (such as a character table).

```
33 \endinput
```