The amsxtra package

American Mathematical Society
Michael Downes

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This file is maintained by the LaTeX Project team. Bug reports can be opened (category amslatex) at https://latex-project.org/bugs/.

1 Introduction

The amsxtra package contains a few rarely used commands that were present in version 1.1 of the amstex package: \fracwithdelims, accentedsymbol, \sphat, \spcheck, \sptilde, \spdot, \spddot, \spdddot, \spbreve. If any of these commands were used in existing documents, the amsxtra package provides a way to get them. But for 99% of documents using the amstex package these commands are just wasted overhead.

```
\ProvidesPackage{amsxtra}[1999/11/15 v1.2c AMS extra commands]
```

We need to ensure that either the amstex package or the amsmath package is loaded. This means we need something a little more complicated than \RequirePackage.

```
\@ifpackageloaded{amstex}{}{%
  \RequirePackage{amsmath}[1996/10/01 v1.2]}
```

Superscripted accent characters.

```
\def\sphat{^{\mathchoice{}{}%
 {\,\,\smash[b]{\hbox{\lower4\ex@\hbox{$\m@th\widehat{\null}$}}}}%
 {\,\smash[b]{\hbox{\lower3\ex@\hbox{$\m@th\hat{\null}$}}}}}}
\def\spcheck{^\vee}
\def\sptilde{^\sim}
\def\spdot{^{\hbox{\raise\ex@\hbox{\normalfont .}}}}
\def\spddot{^{\hbox{\raise\ex@\hbox{\normalfont ..}}}}
\def\spdddot{^{\hbox{\raise\ex@\hbox{\normalfont...}}}}
\def\spbreve{^{\!\smash[b]{\hbox{\lower4\ex@\hbox{\u{}}}}}}
```

The \fracwithdelims command is skipped if the base package is amsmath; it is only needed if the base package is amstex.

```
\@ifpackageloaded{amstex}{%
\def\fracwithdelims#1#2{\new@ifnextchar[{\fracwithdelims@#1#2}%
  {\fracwithdelims@#1#2[\@empty]}}
```

```
\def\fracwithdelims@#1#2[#3]#4#5{\relax
  \ifx\@empty#3{#4\overwithdelims#1#2#5}\else
  {#4\abovewithdelims#1#2#3\relax#5}\fi}
}{}
```

Perhaps `\accentedsymbol` should use `\newsavebox`, but I don't know of any compelling reason at the moment.[mjd,5-Sep-1994] `\accentedsymbol` can only produce a single size of the given symbol, so you'd need two different versions for main size and subscript size.

```
\def\accentedsymbol#1#2{%
  \expandafter\newbox
    \csname\expandafter\@gobble\string#1@box\endcsname
  \expandafter\setbox
    \csname\expandafter\@gobble\string#1@box\endcsname
      \hbox{$\m@th#2$}%
  \newcommand{#1}{%
    \expandafter\copy
      \csname\expandafter\@gobble\string#1@box\endcsname{}}%
}
```

Change the definition of `~` to automatically remove a preceding space as well as a following space, if present.

```
\def~{\nobreakspace}
\DeclareRobustCommand{\nobreakspace}{\unskip\nobreak\ \ignorespaces}
```

The usual `\endinput` to ensure that random garbage at the end of the file doesn't get copied by `docstrip`.

```
\endinput
```