

The `amxtra` package

American Mathematical Society

Michael Downes

Version 1.2c, 1999/11/15

1 Introduction

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

```
1 \ProvidesPackage{amxtra}[1999/11/15 v1.2c]
```

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`.

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

Superscripted accent characters.

```
4 \def\spat{~{\mathchoice{}}}%
5 {\,\,\,\smash[b]{\hbox{\lower4\ex@\hbox{$\m@th\widehat{\null}$}}}}%
6 {\,\,\,\smash[b]{\hbox{\lower3\ex@\hbox{$\m@th\hat{\null}$}}}}%
7 \def\spcheck{~\vee}
8 \def\sptilde{~\sim}
9 \def\spdot{~{\hbox{\raise\ex@\hbox{\normalfont .}}}}
10 \def\spddot{~{\hbox{\raise\ex@\hbox{\normalfont ..}}}}
11 \def\spdddotted{~{\hbox{\raise\ex@\hbox{\normalfont ...}}}}
12 \def\spbrev{~{\!\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`.

```
13 \@ifpackageloaded{amstex}{%
14 \def\fracwithdelims#1#2{\new@ifnextchar[{\fracwithdelims@#1#2}%
15   {\fracwithdelims@#1#2[\@empty]}}
16 \def\fracwithdelims@#1#2[#3]#4#5{\relax
17   \ifx\@empty#3[#4\overwithdelims#1#2#5]\else
18     [#4\abovewithdelims#1#2#3\relax#5]\fi
19 }}{}
```

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.

```
20 \def\accentedsymbol#1#2{%
21   \expandafter\newbox
22     \csname\expandafter\@gobble\string#1\box\endcsname
23   \expandafter\setbox
24     \csname\expandafter\@gobble\string#1\box\endcsname
```

```

25     \hbox{$\m@th#2$}%
26   \newcommand{#1}{%
27     \expandafter\copy
28     \csname\expandafter\@gobble\string#1\box\endcsname{}}%
29 }

```

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

```

30 \def~{\nobreakspace}
31 \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`.

```
32 \endinput
```

Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

Symbols			R
\backslash , <i>5, 6</i>	<code>\fracwithdelims@</code> <i>14, 15, 16</i>	<code>\raise</code> <i>9, 10, 11</i>
<code>\@ifpackageloaded</code> <i>2, 13</i>			<code>\RequirePackage</code> .. <i>1, 3</i>
	H		
\sqcup <i>31</i>	<code>\hat</code> <i>6</i>		S
	<code>\hbox</code> <i>5,</i>		<code>\setbox</code> <i>23</i>
 <i>6, 9, 10, 11, 12, 25</i>		<code>\sim</code> <i>8</i>
A	L		<code>\smash</code> <i>5, 6, 12</i>
<code>\abovewithdelims</code> .. <i>18</i>	<code>\lower</code> <i>5, 6, 12</i>		<code>\spbreve</code> <i>1, 12</i>
<code>\accentedsymbol</code> ... <i>20</i>			<code>\spcheck</code> <i>1, 7</i>
<code>\amsmath package</code> ... <i>1, 1</i>	M		<code>\spdddot</code> <i>1, 11</i>
<code>\amstex package</code> <i>1, 1, 1, 1</i>	<code>\m@th</code> <i>5, 6, 25</i>		<code>\spddot</code> <i>1, 10</i>
<code>\amsxtra package</code> . <i>1, 1, 1</i>	<code>\mathchoice</code> <i>4</i>		<code>\spdot</code> <i>1, 9</i>
C	N		<code>\sphat</code> <i>1, 4</i>
<code>\copy</code> <i>27</i>	<code>\new@ifnextchar</code> ... <i>14</i>		<code>\sptilde</code> <i>1, 8</i>
D	<code>\newbox</code> <i>21</i>		U
<code>\DeclareRobustCommand</code>	<code>\nobreakspace</code> .. <i>30, 31</i>		<code>\u</code> <i>12</i>
..... <i>31</i>	<code>\normalfont</code> .. <i>9, 10, 11</i>		<code>\unskip</code> <i>31</i>
<code>\docstrip</code> <i>2</i>	<code>\null</code> <i>5, 6</i>		
E	O		V
<code>\endinput</code> <i>2</i>	<code>\overwithdelims</code> ... <i>17</i>		<code>\vee</code> <i>7</i>
<code>\ex@</code> .. <i>5, 6, 9, 10, 11, 12</i>			
F	P		W
<code>\fracwithdelims</code> <i>1, 1, 14</i>	<code>\ProvidesPackage</code> ... <i>1</i>		<code>\widehat</code> <i>5</i>