omtext: Semantic Markup for Mathematical Text Fragments in LATEX*

Michael Kohlhase FAU Erlangen-Nürnberg http://kwarc.info/kohlhase

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Abstract

The omtext package is part of the STEX collection, a version of TEX/LATEX that allows to markup TEX/LATEX documents semantically without leaving the document format, essentially turning TEX/LATEX into a document format for mathematical knowledge management (MKM).

This package supplies an infrastructure for writing OMDoc text fragments in \LaTeX

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Contents

1	Intr	roduction	3					
2	$Th\epsilon$	e User Interface	3					
	2.1	Package Options	3					
	2.2	Mathematical Text	3					
	2.3	Phrase-Level Markup	3					
	2.4	Declarations (under development)	4					
	2.5	Block-Level Markup	5					
	2.6	Index Markup	5					
	2.7	Miscellaneous	6					
3	Lim	imitations						
4	Imp	Implementation 7						
	4.1	Package Options	7					
	4.2	Mathematical Text	7					
	4.3	Phrase-level Markup	8					
	4.4	Declarations (under development)	9					
	4.5	Block-Level Markup	9					
	4.6		10					
	4.7		11					
	4.8		12					

Introduction 1

The omtext package supplies macros and environment that allow to mark up mathematical texts in STFX, a version of TFX/LATFX that allows to markup TFX/LATFX documents semantically without leaving the document format, essentially turning TFX/IATFX into a document format for mathematical knowledge management (MKM). The package supports direct translation to the OMDoc format [Koh06]

2 The User Interface

2.1 Package Options

showmeta

mh

The omtext package takes a single option: showmeta. If this is set, then the metadata keys are shown (see [Koh20b] for details and customization options).

The mh option turns on MathHub support; see [Koh20a].

2.2Mathematical Text

omtext

The omtext environment is used for any text fragment that has a contribution to a text that needs to be marked up. It can have a title, which can be specified via the

title= type= title key. Often it is also helpful to annotate the type key. The standard relations from rhetorical structure theory abstract, introduction, conclusion, thesis, comment, antithesis, elaboration, motivation, evidence, transition, note,

for=

annote are recommended as values. Note that some of them are unary relations like introduction, which calls for a target. In this case, a target using the for key should be specified. The transition relation is special in that it is binary (a "transition between two statements"), so additionally, a source should be specified

using the from key.

from=

display=

Note that the values of the type keys are often displayed as cues in the text. This can be turned off by setting the display key to the value flow. Sometimes we want to specify that a text is a continuation of another, this can be done by

continues=

giving the identifier of this in the continues key.

functions= theory=

verbalizes=

Finally, there is a set of keys that pertain to the mathematical formulae in the text. The functions key allows to specify a list of identifiers that are to be interpreted as functions in the generate content markup. The theory specifies a module (see [KGA20]) that is to be pre-loaded in this one Finally, verbalizes specifies a (more) formal statement (see [Koh20c]) that this text verbalizes or paraphrases.²

2.3 Phrase-Level Markup

\phrase verbalizes= type= The phrase macro allows to mark up phrases with semantic information. It takes an optional KeyVal argument with the keys verbalizes and type as above and style, class, index that are disregarded in the LATEX, but copied into the gen-

style

¹EdNote: this is not implemented yet. ²EdNote: MK:specify the form of the reference.

class index

3

EdN:1 EdN:2

erated content markup.

\nlex

We use the $\nex{\langle phrase \rangle}$ for marking up phrases that serve as natural language examples and $\nex{\langle phrase \rangle}$ for counter-examples (utterances that are not acceptable for some reason). In natural language examples, we sometimes use "co-reference markers" to specify the resolution of anaphora and the like. We use the $\coreft{\langle phrase \rangle}{\langle mark \rangle}$ to mark up the "target" of a co-reference and analogously \corefs for coreference source – e.g. for an anaphoric reference. The usage is the following:

\coreft \corefs

is formatted to

If a farmer¹ owns a donkey², he₂ beats it₂.

\sinlinequote

The sinlinequote macro allows to mark up quotes inline and attribute them. The quote itself is given as the argument, possibly preceded by the a specification of the source in a an optional argument. For instance, we would quote Hamlet with

\sinlinequote[Hamlet, \cite{Shak:1603:Hamlet}]{To be or not to be}

\@sinlinequote

which would appear as "To be or not to be" Hamlet, (Shakespeare 1603) in the text. The style in which inline quotations appear in the text can be adapted by specializing the macros \@sinlinequote — for quotations without source and \@@sinlinequote — for quotations with source.

2.4 Declarations (under development)

\vdec \vids \vrest Declarations are special phrases that carry a lot of meaning in mathematics: they introduce and further specify the identifiers available in formulae. They are marked up via the \vec macro. Inside a declaration we can use the \vec macro to mark up the variable names and \vec to mark up the restrictions. In the simplest case we have a single variable as in "... for all u", which we mark up as.

```
... for all \vdec{\vids[u]{$u$}}.
```

A more complex example has multiple identifiers embedded in a restriction, as in "Let $x, y, z \in \mathbb{R}$, such that x + 2y = z, then ...", which we mark up as

Let \vdec[x,y,z]{\vcond\$\minset{x,y,z}\Reals\$},
 such that \vrest{\$x+2y=z\$}}, then \ldots''

 $345 \ 6$



 $^{^3{}m EDNote}$: explain and make better examples

 $^{^4\}mathrm{EdNote}$: talk with Frederic about this see what other examples there are.

 $^{^5{\}rm EDNote}:$ how do we identify the variables in complex restriction patterns. maybe with LMXref, which we should reinstate for this.

 $^{^6\}mathrm{EdNote}$: document strucdec and impdec

2.5 Block-Level Markup

sblockquote

\begin@sblockquote \end@@sblockquote

The sblockquote environment is the big brother of the \sinlinequote macro. It also takes an optional argument to specify the source. Here the four internal macros \begin@sblockquote to \end@@sblockquote are used for styling and can be adapted by package integrators. Here a quote of Hamlet would marked up as

```
\begin{sblockquote}[Hamlet, \cite{Shak:1603:Hamlet}]\obeylines
To be, or not to be: that is the question:
  Whether 'tis nobler in the mind to suffer
\end{sblockquote}
```

and would render as

To be, or not to be: that is the question: Whether 'tis nobler in the mind to suffer

Hamlet, (Shakespeare 1603)

\lec

The \lec macro takes one argument and sets it as a comment at the end of the line, making sure that if the content is too long it is pushed into a new line. We use it internally for placing the of source of the sblockquote environment above. The actual appearance of the line end comment is determined by the \@@lec macro, which can be customized in the document class.

\@@lec

2.6 Index Markup

The omtext package provides some extensions for the well-known indexing macros of IATEX. The main reason for introducing these macros is that index markup in OMDoc wraps the indexed terms rather than just marking the spot for cross-referencing. Furthermore the index commands only indexes words unless thenoindex option is set in the \usepackage. The omtext package and class make the usual \index macro undefined⁷.

noindex

EdN:7

\indi

The \indi macro renders a word and marks it for the index. Sometimes, we want to index a slightly different form of the word, e.g. for non-standard plurals: while \indi{word}s works fine, we cannot use this for the word "datum", which has the plural "data". For this we have the macro \aindi, which takes another argument for the displayed text, allowing us to use \aindi{data}{datum}, which prints "data" but puts "datum" into the index.

\aindi

The second set of macros adds an infrastructure for multi-word compounds. Take for instance the compound "OMDoc document", which we usually want to add into the index under "OMDoc" and "document". \indii{OMDoc}{document} is a variant of \indi that will do just this. Again, we have a version that prints a variant: This is useful for situations like this the one in Figure 1:

\indii

Analogously, there are variants for tree/four-word compounds: \indii, \aindii, \indiv, and \indiv. For instance for "wonderful OMDoc document". \atwin{wonderful}{OMdoc}{document} will make the necessary index entries un-

\indiii \aindiii \indiv \aindiv \indiii

 $^{^7\}mathrm{Ed}\mathrm{No}\mathrm{TE}\mathrm{:}$ implement this and issue the respective error message

We call group \aindii{Abelian}{Abelian}{group}, iff \ldots
will result in the following
We call group Abelian, iff ...
and put "Abelian Group" into the index.

Example 1: Index markup

der "wonderful" and "document".

\Indi*

Finally, there are variants \Indi, \Indii, \Indiii, and \Indiv that print the capitalized version of the word complex, and \indis, \indiis, \indiis, and \indivs that add a plurals, and ultimately \Indis, \Indiis, \indiiis, and \Indivs that print the capitalized version of the plural.

\Indi* and \ind \Indivs All in

All index macros take an optional first keyword argument: If the loadmodules key is given, we import the module we are in, otherwise all the currently imported modules. We do not have to require the module files, since the index is a the end of the document. If the at key is given, then we use that for sorting in the index.

2.7 Miscellaneous

We supply some text-level shortcuts for mathematical formulations, for instance $\hat{=}$ for "this corresponds to" or \leadsto for "therefore". They are semantic in the sense that they are used as special words – not part of formulae, even though they look like mathematical symbols. The following table gives the full set.

macro	pres.	stands for
\hateq	>	this corresponds to
\hatequiv	≘	this statement corresponds to
\ergo	\sim	therefore
\ogre	← ~	because of

\hateq \hatequiv \ergo \ogre

3 Limitations

In this section we document known limitations. If you want to help alleviate them, please feel free to contact the package author. Some of them are currently discussed in the STEX GitHub repository [sTeX].

1. none reported yet

4 Implementation

EdN:8

4.1 Package Options

We declare some switches which will modify the behavior according to the package options. Generally, an option xxx will just set the appropriate switches to true (otherwise they stay false).⁸

```
1 (*package)
2 \newif\if@omtext@mh@\@omtext@mh@false
3 \DeclareOption{mh}{\@omtext@mh@true
4 \PassOptionsToPackage{\CurrentOption}{modules}}
5 \newif\ifindex\indextrue
6 \DeclareOption{noindex}{\indexfalse}
7 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{modules}}
8 \ProcessOptions
9 \ifindex\makeindex\fi
10 \RequirePackage{stex-base}
11 \if@omtext@mh@\RequirePackage{omtext-mh}\fi
12 \RequirePackage{xspace}
13 \RequirePackage{modules}
14 \RequirePackage{comment}
15 \RequirePackage{latexsym}
16 \RequirePackage{graphicx}
```

The next package relies on the LATEX3 kernel, which LATEXMLonly partially supports. As it is purely presentational, we only load it for PDFlatex

17 \if@latexml\else\RequirePackage{mdframed}\fi

4.2 Mathematical Text

We define the actions that are undertaken, when the keys are encountered. The first set just records metadata; this is very simple via the \addmetakey infrastructure [Koh20b]. Note that we allow math in the title field, so we do not declare it to be Semiverbatim (indeed not at all, which allows it by default).

```
18 \srefaddidkey{omtext}
19 \addmetakey[] {omtext} {functions}
20 \addmetakey*{omtext} {display}
21 \addmetakey{omtext} {for}
22 \addmetakey{omtext} {from}
23 \addmetakey{omtext} {type}
24 \addmetakey*{omtext} {title}
25 \addmetakey*{omtext} {start}
26 \addmetakey{omtext} {theory}
27 \addmetakey{omtext} {continues}
28 \addmetakey{omtext} {verbalizes}
29 \addmetakey{omtext} {subject}
```

⁸EDNOTE: need an implementation for LATEXML

\st@flow We define this macro, so that we can test whether the display key has the value flow

30 \def\st@flow{flow}

We define a switch that allows us to see whether we are inside an omtext environment or a statement. It will be used to give better error messages for inline statements.

31 \newif\if@in@omtext\@in@omtextfalse

omtext The omtext environment can have a title, which is used in a similar way. We redefine the \lec macro so the trailing \par does not get into the way.

```
32 \def\omtext@pre@skip{\smallskip}
33 \def\omtext@post@skip{}
34 \newenvironment{omtext}[1][]{\@in@omtexttrue%
    \bgroup\metasetkeys{omtext}{#1}\sref@label@id{this paragraph}%
    \def\lec##1{\@lec{##1}}%
36
    \omtext@pre@skip\par\noindent%
37
    \ifx\omtext@title\@empty%
38
39
      \ifx\omtext@start\@empty\else%
        \ifx\omtext@display\st@flow\omtext@start\else\stDMemph{\omtext@start}\fi\enspace%
40
      \fi% end omtext@start empty
41
    \else\stDMemph{\omtext@title}:\enspace%
42
      \ifx\omtext@start\@empty\else\omtext@start\enspace\fi%
43
   \fi% end omtext@title empty
44
  \ignorespacesandpars}
46 {\egroup\omtext@post@skip\@in@omtextfalse\ignorespacesandpars}
```

4.3 Phrase-level Markup

```
\phrase For the moment, we do disregard the most of the keys
         47 \srefaddidkey{phrase}
         48 \addmetakey{phrase}{style}
         49 \addmetakey{phrase}{class}
         50 \addmetakey{phrase}{index}
         51 \addmetakey{phrase}{verbalizes}
         52 \addmetakey{phrase}{type}
         53 \addmetakey{phrase}{only}
         54 \mbox{ newcommand\phrase[2][]{\mbox{wetasetkeys{phrase}{#1}}},
         55 \ifx\prhase@only\@empty\only<\phrase@only>{#2}\else #2\fi}
\coref*
         56 \providecommand\textsubscript[1]{\ensuremath{_{#1}}}
         57 \newcommand\corefs[2]{#1\textsubscript{#2}}
         58 \newcommand\coreft[2]{#1\textsuperscript{#2}}
 n*lex
         59 \mbox{\nlex[1]}{\green{\sl{#1}}}
         60 \newcommand\nlcex[1]{*\green{\sl{#1}}}
```

sinlinequote

- 61 \def\@sinlinequote#1{''{\sl{#1}}''}
- 62 \def\@@sinlinequote#1#2{\@sinlinequote{#2}~#1}
- 63 \newcommand\sinlinequote[2][]
- 64 {\def\@opt{#1}\ifx\@opt\@empty\@sinlinequote{#2}\else\@@sinlinequote\@opt{#2}\fi}

4.4 Declarations (under development)

The declaration macros are still under development (i.e. the macros) are still under development and may change at any time. Currently they are completely empty.

- 65 \newcommand\vdec[2][]{#2}
- $66 \mbox{ } \mbox{newcommand} \mbox{vrest[2][]{#2}}$
- 67 \newcommand\vcond[2][]{#2}

EdN:9 \strucdec

68 \newcommand\strucdec[2][]{#2}

EdN:10 \impdec

69 \newcommand\impdec[2][]{#2}

4.5 Block-Level Markup

sblockquote

- 70 \def\begin@sblockquote{\begin{quote}\sl}
- 71 \def\end@sblockquote{\end{quote}}
- 72 \def\begin@@sblockquote#1{\begin@sblockquote}
- $73 \end@0sblockquote\#1{\end@sblockquote} \\$
- 74 \newenvironment{sblockquote}[1][]
- $75 \quad \{\def\@pt{\#1}\ifx\@pt\@empty\begin@sblockquote\else\begin@0sblockquote\@pt\fi\}$
- 76 {\ifx\@opt\@empty\end@sblockquote\else\end@@sblockquote\@opt\fi}

sboxquote

- 77 \newenvironment{sboxquote}[1][]
- 78 {\def\@@src{#1}\begin{mdframed}[leftmargin=.5cm,rightmargin=.5cm]}
- 79 {\@lec{\textrm\@@src}\end{mdframed}}

The line end comment macro makes sure that it will not be forced on the next line unless necessary.

\lec The actual appearance of the line end comment is determined by the \@@lec macro, which can be customized in the document class. The basic one here is provided so that it is not missing.

- 80 \providecommand{\@@lec}[1]{(#1)}
- $81 \end{area} 1 \end{area} 1$
- 82 \def\lec#1{\@lec{#1}\par}

 $^{^9{\}rm EdNote}\colon$ document above $^{10}{\rm EdNote}\colon$ document above

4.6 Index Markup

\omdoc@index*

These are the main internal indexing commands – dividing them into four macros is awful, but I did not get list processing running. It makes sure that the modules necessary for interpreting the math in the index entries are loaded. If the loadmodules key is given, we import the module we are in otherwise all the currently imported modules. We do not have to require the module files, since the index is a the end of the document. If the at key is given, then we use that for sorting in the index.

```
83 \addmetakey{omdoc@index}{at}
84 \addmetakey[false] {omdoc@index}{loadmodules}[true]
85 \newcommand\omdoc@indexi[2][]{\ifindex%
86 \metasetkeys{omdoc@index}{#1}%
87 \@bsphack\begingroup\@sanitize%
88 \protected@write\@indexfile{}{\string\indexentry%
89 {\ifx\omdoc@index@at\@empty\else\omdoc@index@at @\fi%
90 \ifx\omdoc@index@loadmodules\@true%
91 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#2}%
92 \else #2\fi% loadmodules
93 }{\thepage}}%
94 \endgroup\@esphack\fi}%ifindex
95 \newcommand\omdoc@indexii[3][]{\ifindex%
96 \metasetkeys{omdoc@index}{#1}%
97 \@bsphack\begingroup\@sanitize%
98 \protected@write\@indexfile{}{\string\indexentry%
99 {\ifx\omdoc@index@at\@empty\else\omdoc@index@at @\fi%
100 \ifx\omdoc@index@loadmodules\@true%
101 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#2}!%
102 \string\withused\mbox{\climate{mod@id}\used\mbox{\climate{mod@id}{#3}},}
103 \else #2!#3\fi% loadmodules
104 }{\thepage}}%
105 \endgroup\@esphack\fi}%ifindex
106 \newcommand\omdoc@indexiii[4][]{\ifindex%
107 \metasetkeys{omdoc@index}{#1}%
108 \@bsphack\begingroup\@sanitize%
109 \protected@write\@indexfile{}{\string\indexentry\%
110 {\ifx\omdoc@index@at\@empty\else\omdoc@index@at @\fi%
111 \ifx\omdoc@index@loadmodules\@true%
112 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#2}!%
113 \string\withusedmodules\\@ifundefined\mod@id\\used@modules\mod@id\{#3}!%
114 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#4}%
115 \else #2!#3!#4\fi% loadmodules
116 }{\thepage}}%
117 \endgroup\@esphack\fi}%ifindex
118 \newcommand\omdoc@indexiv[5][]{\ifindex%
119 \metasetkeys{omdoc@index}{#1}%
120 \@bsphack\begingroup\@sanitize%
121 \protected@write\@indexfile{}{\string\indexentry%
```

122 {\ifx\omdoc@index@at\@empty\else\omdoc@index@at @\fi%

```
123 \ifx\omdoc@index@loadmodules\@true%
124 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#2}!%
125 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#3}!%
126 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#4}%
127 \string\withusedmodules{\@ifundefined{mod@id}\used@modules\mod@id}{#5}%
128 \else #2!#3!#4!#5\fi% loadmodules
129 }{\thepage}}%
130 \endgroup\@esphack\fi}%ifindex
```

Now, we make two interface macros that make use of this:

indi

```
131 \newcommand\aindi[3][]{{#2}\omdoc@indexi[#1]{#3}}
132 \newcommand\indi[2][]{{#2}\omdoc@indexi[#1]{#2}}
133 \newcommand\indis[2][]{{#2}\omdoc@indexi[#1]{#2s}}
134 \newcommand\Indi[2][]{{\captitalize{#2}}\omdoc@indexi[#1]{#2}}
135 \newcommand\Indis[2][]{{\capitalize{#2}}\omdoc@indexi[#1]{#2s}}
137 \newcommand\@indii[3][]{\omdoc@indexii[#1]{#2}{#3}\omdoc@indexii[#1]{#2}}
138 \newcommand\aindii[4][]{#2\@indii[#1]{#3}{#4}}
139 \newcommand\indii[3][]{{#2 #3}\@indii[#1]{#2}{#3}}
140 \newcommand\indiis[3][]{{#2 #3s}\@indii[#1]{#2}{#3}}
141 \newcommand\Indii[3][]{{\captitalize{#2 #3}}\@indii[#1]{#2}{#3}}
142 \newcommand\Indiis[3][]{{\capitalize{#2 #3}}\@indii[#1]{#2}{#3}}
144 \newcommand\@indiii[4][]{\omdoc@indexiii[#1]{#2}{#3}{#4}\omdoc@indexii[#1]{#3}{#2 (#4)}}
145 \end{1} 145 \end{1} [5] [] {\{\#2\} \end{1} [\#1] $\{\#3\} $\{\#4\} $\{\#5\}$} 
146 \end{indiii} [4] [] { \#2 \#3 \#4 } @indiii [\#1] { \#2 } { \#3 } { \#4 } }
147 \newcommand\indiiis[4][]{{#2 #3 #4s}\@indiii[#1]{#2}{#3}{#4}}
148 \newcommand\Indiii[4][]{\captitalize{#2 #3 #4}\@indiii[#1]{#2}{#3}{#4}}
149 \newcommand\Indiiis [4] [] {\capitalize{#2 #3 #4s}\@indiii[#1] {#2} {#3} {#4}}
150
151 \newcommand\@indiv[5][]{\omdoc@indexiv[#1]{#2}{#3}{#4}{#5}}
152 \newcommand\aindiv[6][]{#2\@indiv[#1]{#3}{#4}{#5}{#6}}
153 \newcommand\indiv[5][]{{#2 #3 #4 #5}\@indiv[#1]{#2}{#3}{#4}{#5}}
154 \newcommand\indivs[5][]{{#2 #3 #4 #5s}\@indiv[#1]{#2}{#3}{#4}{#5}}
155 \newcommand\Indiv[5][]{\capitalize{#2 #3 #4 #5s}\@indiv[#1]{#2}{#3}{#4}{#5}}
156 \newcommand\Indivs[5][]{\capitalize{#2 #3 #4 #5s}\@indiv[#1]{#2}{#3}{#4}{#5}}
```

4.7 Miscellaneous

Some shortcuts that use math symbols but are not mathematical at all; in particular, they should not be translated by LATEXML.

```
157 \newcommand\hateq{\ensuremath{\widehat=}\xspace}
158 \newcommand\hatequiv{\ensuremath{\widehat\equiv}\xspace}
159 \@ifundefined{ergo}%
160 {\newcommand\ergo{\ensuremath{\leadsto}\xspace}}%
161 {\renewcommand\ergo{\ensuremath{\leadsto}\xspace}}%
162 \newcommand{\reflect@squig}[2]{\reflectbox{$\m@th#1\rightsquigarrow$}}%
```

```
163 \newcommand\ogre{\ensuremath{\mathrel{\mathpalette\reflect@squig\relax}}\xspace}%
```

- 164 \newcommand\notergo{\ensuremath{\not\leadsto}}
- 165 \newcommand\notogre{\ensuremath{\not\mathrel{\mathpalette\reflect@squig\relax}}\xspace}%

4.8 Deprecated Functionality

In this section we centralize old interfaces that are only partially supported any more.

$\$

- 166 \newcommand\indextoo[2][]{\indi[#1]{#2}%
- 167 \PackageWarning{omtext}{\protect\indextoo\space is deprecated, use \protect\indi\space instead}
- 168 \newcommand\indexalt[2][]{\aindi[#1]{#2}%
- 169 \PackageWarning{omtext}{\protect\indextoo\space is deprecated, use \protect\aindi\space instead
- 170 \newcommand\twintoo[3][]{\indii[#1]{#2}{#3}%
- 171 \PackageWarning{omtext}{\protect\twintoo\space is deprecated, use \protect\indii\space instead}
- 172 \newcommand\twinalt[3][]{\aindii[#1]{#2}{#3}%
- 173 \PackageWarning{omtext}{\protect\twinalt\space is deprecated, use \protect\aindii\space instead
- 174 \newcommand\atwintoo[4][]{\indiii[#1]{#2}{#3}{#4}%
- 175 \PackageWarning{omtext}{\protect\atwintoo\space is deprecated, use \protect\indiii\space instea
- 176 \newcommand\atwinalt[4][]{\aindii[#1]{#2}{#3}{#4}%
- 177 \Package\Warning\{omtext\}\{\protect\atwinalt\space is deprecated, use \protect\aindiii\space inste 178 $\langle /package \rangle$

\my*graphics

- 179 \newcommand\mygraphics[2][]{\includegraphics[#1]{#2}%
- $180 \quad \verb|\PackageWarning{omtext}{\protect\mygraphics\space is deprecated, use \protect\include graphics}| \end{minipage}$
- 181 \newcommand\mycgraphics[2][]{\begin{center}\mygraphics[#1]{#2}\end{center}%
 - 82 \PackageWarning{omtext}{\protect\mycgraphics\space is deprecated, use \protect\includegraphic
- 183 \newcommand\mybgraphics[2][]{\fbox{\mygraphics[#1]{#2}}%
- 184 \PackageWarning{omtext}{\protect\mybgraphics\space is deprecated, use \protect\includegraphic
- 185 \newcommand\mycbgraphics[2][]{\begin{center}\fbox{\mygraphics[#1] {#2}}\end{center}\%
 - 66 \PackageWarning{omtext}{\protect\mycbgraphics\space is deprecated, use \protect\includegraphi

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.

Abelian group group, 6 Abelian, 6

Change History

v0.4		cimilarly 1				
Genera augn	l: added index markup 1 nenting the index macros h optional values 1	similarly				
with optional values		v1.0 General: fixing typos v1.1 General: changing \textleadsto to \ergo and defining inverse \ogre				
Refere	ences					
[KGA20]	Semantic Macros and Module	inev, and Rares Ambrus. modules.sty: e Scoping in sTeX. Tech. rep. 2020. URL: TeX/sTeX/raw/master/sty/modules/				
[Koh06]	bh06] Michael Kohlhase. OMDoc - An open markup format for mathematical documents [Version 1.2]. LNAI 4180. Springer Verlag, Aug. 2006. URL: http://omdoc.org/pubs/omdoc1.2.pdf.					
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