The Bezos bundle of packages

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2009-06-12

This document expains briefly the packages written by me and grouped under the Bezos directory in CTAN. They are in some sense small packages and this is the very reason they have been grouped here. Large packages like gloss (written with José Luis Díaz), titlesec (including titletoc) and enumitem are under their own directories.

1 Accents

This package provides some miscellaneous tools for mathematical accents, with the following goals in mind:

- Creating faked accents from non-accent symbols, like $\overset{*}{s}$.

- Grouping them, perhaps including actual accents, like $\hat{\overset{*}{h}}$. That has the side effect that multiple actual accents can be built as well.

- Putting them below the main symbol instead of above.

That is done so that the faked accents behave in quite similar fashion to actual accents do; i.e., the skew of the letter is taken into account (compare $\overset{*}{d}$ with $\overset{*}{h}$) and the sub and superscripts attached to it aren't misplaced (look carefully at $\overset{*}{f}^1_1$).

The two basic commands are the following:

> `\accentset{`⟨*accent*⟩`}{`⟨*symbol*⟩`}`

Builds a faked accent, as for instance

`\accentset{\star}{d}`	$\overset{*}{d}$
`\accentset{\diamond}{h}`	$\overset{\diamond}{h}$
`\tilde{\accentset{\circ}{\phi}}`	$\overset{\sim}{\overset{\circ}{\phi}}$

> `\underaccent{`⟨*accent*⟩`}{`⟨*symbol*⟩`}`

This command puts the ⟨*accent*⟩ under the ⟨*symbol*⟩. Both real and faked accents are allowed. For instance,

`\underaccent{\hat}{x}`	$\underset{\wedge}{x}$
`\underaccent{\bar}{\gamma}`	$\underset{-}{\gamma}$
`\underaccent{\triangleright}{q}`	$\underset{\triangleright}{q}$
`\underaccent{\tilde}{\mathcal{A}}`	$\underset{\sim}{\mathcal{A}}$

Typeset `accents.tex` for further details.

2 Esindex

This package defines the command `\esindex` which easies writing Spanish index entries:

`\esindex{cañón}`

is equivalent to

`\index{can^^ffon@cañón}`

This way, entries with diacritical marks are properly sorted. It has options to ignore spaces (letter-by-letter) and particles, and to predefine sort keys.

The manual is `esindex.tex` and is in Spanish.

3 Tensind

This package provides typographically fine tensorial notation, with the following features:

- Dots filling gaps.

- Symbol subtitution to easy typing (if you are using greek letters, for example).

- Corrected position of indexes: horizontally, to compensate the small displacement in letters like f (look carefully at f_*) and vertically, to avoid superscripts too raised.

- Aditional minute corrections are also allowed.

After setting a *tensor delimiter* with \tensordelimiter you can write tensorial indexes in a very compact way. In subsequent examples we will assume

\tensordelimiter{?}

and every instance of ? will actually mean ⟨*tensor-delim*⟩.

Tha basic commands are the following:

?[⟨*format*⟩]{⟨*nucleous*⟩}{⟨*special-index*⟩}... ⟨*super-or-sub*⟩...?

Creates a tensor. A few examples will be illustrative:

?R_ij^kl_\alpha^\beta?	$R_{ij\cdot\cdot\alpha\cdot}^{kl\beta}$
?R^ij_kl^\alpha_\beta?	$R^{ij\alpha}_{kl\cdot\beta}$
?R**_ij^kl_\alpha^\beta?	$R^{**kl\beta}_{ij\cdot\cdot\alpha\cdot}$
?R**^ij_kl^\alpha_\beta?	$R^{**ij\alpha}_{kl\cdot\beta}$

The following letters may be used in format:

- l Gaps to the left of the last index are filled with dots.

- r Gaps to the right of the first index are filled.

- e If there is no index (empty), gaps are filled.

- b Only gaps in subscripts are filled.

(There are further options to set the vertical spacing.)

?[]f\prime_ij^kl?	f'^{kl}_{ij}
?[e]f^ij?	$f^{ij}_{\cdot\cdot}$
?[l]f*_ij^kl?	$f^{*\cdot\cdot kl}_{ij}$

Please, typeset tensind.tex for further datails.

4 Subdocs

This is a tentative package aiming to provide a different approach for multidocument works (mainly, books with a document per chapter). Unlike the \include mechanism, every subdocument is a complete normal LaTeX document and can be typeset separately. What the package does is sharing the aux files. It's still an alpha version, and no attempt has been done yet to make it to work with, say, hyperref.

This approach has the following advantages: 1) packages can be loaded just when a part requires them; 2) generated pdf/dvi/ps files are kept.

You need a master tex file containing a \subdocuments command listing the files. With an optional argument you can set its behaviour:

\subdocuments[clear=double]{file1, file2, file3}

The option clear=double adds an empty page at the end to give a even number of pages. clear=single doesn't and it's the default. Spaces and new lines before and after commas are ignored, as well as empty items. It relies on the keyval package, so names containing = must be given within braces. This file can be used as a shared preample, with common settings for all the documents.

Documents must have the folowing line just after \documentclass:

\usepackage[master]{subdocs}

where `master` is the name of the file described above.

Since every subdocument reads all the aux files, `\tableofcontents` may be used where desired.

to be inside these macros – most of classes do that, but there are exceptions like memoir.

To use it, just `\usepackage{arabicfront}`.

5 Dotlessi

This package defines two commands: `\dotlessi` and `\dotlessj`, which give you access to dotless i's and j's in math mode. They are intended for symbols in non English languages. If the default math font is used, they are equivalent to `\imath` and `\jmath`; if a different font is used (like `\mathrm`, `\mathbf`, `\mathsf`) these commands look in the corresponding font tables to find their codes. In text mode, they expand to `\i` and `\j`. For example:

`f_{\mathrm{m\acute{\dotlessi}n}}` $\quad f_{\text{mín}}$

6 Checkend

When an environment is left open, LaTeX gives an error at the end of the document. However it only informs about the first of them, while the rest are shown with meaningless errors:

`(\end occurred inside a group at level N)`

This package replaces them with more useful messages which show which environments (in reverse order) were not closed.

That's all. There are no user macros. Just load the package.

7 Arabicfront

This package modifies the definitions of `\frontmatter` and `\mainmatter` so that page numbering starts in arabic style from the front matter while preserving the rest of the original definitions. For it to work, `\pagenumbering` has