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Editorial

Liebe Leserinnen und Leser,

dieses Heft ist ausschließlich dem CTAN gewidmet. Während im vorletzten Heft noch ein Artikel zum formalen Aufbau erschien, geht es hier nun um den wichtigeren Teil, die Software rund um (\LaTeX) . Das elektronische Suchen im CTAN ist eine Sache, das Lesen einer Zusammenfassung eine andere. Auch wenn diese Zusammenstellung früher oder später veraltet ist, wünschen sich nicht wenige Leser immer wieder eine gedruckte Version, die wir hiermit vorlegen.

Wie Sie der Einleitung zu dem Artikel entnehmen können, weiß eigentlich keiner mehr so genau, wieviel Pakete insgesamt und vor allem zu welchem Thema auf CTAN vorhanden sind. Daher hatte sich Graham Williams vor einigen Jahren die Arbeit gemacht und den CTAN-Katalog erstellt, der eine alphabetische Auflistung der Pakete bzw. Software enthält, die für (\LaTeX) von Interesse sind. Was dennoch lange Zeit fehlte, war eine inhaltsbezogene Auflistung, die Jürgen Fenn vor einiger Zeit als HTML-Version in Angriff nahm und weiterhin betreut.

Das eben Gesagte könnte man auch auf die FAQ übertragen, sodass es sicherlich auch hier Sinn macht, irgendwann einmal eine gedruckte Version vorzulegen. Sei es im Rahmen einer \TeX nischen Komödie oder vielleicht sogar als Teil der sogenannten DANTE-Edition, die bislang aus zwei Veröffentlichungen besteht. Mit dieser Edition, die am Ende dieser Komödie kurz vorgestellt wird, soll den DANTE-Mitgliedern bisher nicht verfügbare Literatur zu \TeX -relevanten Themen kostengünstig zur Verfügung gestellt werden.

Damit wünsche ich den Lesern eine angenehme Lektüre und hoffentlich die eine oder andere Überraschung über ein neu entdecktes Paket und möchte nicht versäumen daran zu erinnern, dass »Die \TeX nische Komödie« immer auf Beiträge von Mitgliedern wartet und verbleibe

mit \TeX nischen Grüßen

Ihr Herbert Voß

Hinter der Bühne

Vereinsinternes

Grußwort

Liebe Mitglieder,

wie Sie im letzten Editorial lesen durften, war die Ausgabe 4/2005 die letzte, die von Gerd Neugebauer als Chefredakteur begleitet wurde. Gerd hat dieses Amt 1997 übernommen und seitdem mit kurzer Unterbrechung inne gehabt. Wir hoffen, dass Sie die von ihm betreuten Ausgaben ebenso genossen haben wie wir. Leider lassen Gerds berufliche Verpflichtungen ihm weniger Zeit, die er auch verstärkt für das $\epsilon\lambda\TeX$ -Projekt nutzen will. Daher bleibt uns nur, ihm für seine langjährige Arbeit in der Redaktion herzlich zu danken. Zum Glück hat sich mit Herbert Voß ein kompetenter Nachfolger gefunden. Wir wünschen Herbert für seine Tätigkeit viel Erfolg.

Unser zweiter Dank gilt einer Person, die noch länger aktiv ist, wenn auch eher im Verborgenen. Reinhard Zierke, der zusammen mit Rainer Schöpf die Server von DANTE e.V. und insbesondere den deutschen Hauptknoten von CTAN betreut hat, zuletzt beim Fachbereich Informatik der Universität Hamburg. Auch Reinhard hat sich entschieden, etwas kürzer zu treten und daher die Betreuung der Server aufzugeben. Auch Reinhard gilt unser aller Dank für seine Arbeit. Zum Zeitpunkt des Entstehens dieses Grußworts prüfen wir noch die Optionen für den zukünftigen Standort der Server, sei es in Form eines neuen Standortes im Universitätsbereich oder bei einem kommerziellen Provider. Wir hoffen, dass sich kurzfristig eine Lösung ergibt. Weiterhin entsteht natürlich eine Lücke bei der Betreuung der Server, die nun allein in den Händen von Rainer Schöpf liegt. Vielleicht fühlt sich ja ein Mitglied mit Erfahrung in der UNIX-Systemadministration zur Mithilfe berufen?

Mit freundlichem Gruß,

Volker RW Schaa	Klaus Höppner
Vorsitzender	Stellvertretender Vorsitzender

Bretter, die die Welt bedeuten

CTAN und der T_EX Catalogue

Jürgen Fenn, Carole Siegfried, Herbert Voß

Fragt man jemanden, wieviel Pakete es mittlerweile auf CTAN gibt, so können einem selbst die CTAN-Maintainer keine genaue Antwort geben. Dieser Zustand ist gleichermaßen positiv wie negativ zu sehen, denn zum einen zeigt er die ununterbrochen vorhandene Kreativität der T_EX-User, die selbst 25 Jahre nach der Entwicklung von T_EX immer noch neue Pakete entwickeln und auf CTAN der Allgemeinheit zur Verfügung stellen, und zum anderen stellt sich aber die Frage, wie das Ganze organisiert werden soll.

Um die Arbeit für die Autoren zu erleichtern, wurden die Paketbeschreibungen nicht übersetzt, was aber keine große Schwierigkeit darstellen sollte, da die Paketnamen häufig schon einen Zusammenhang zum Kontext darstellen. Weiterhin wurde der Index mit den deutschen Bezeichnungen beziehungsweise Termini erstellt.

Einführung

Das *Comprehensive T_EX Archive Network* CTAN ist in der Vereinszeitschrift »Die T_EXnische Komödie« bereits ausführlich vorgestellt worden. Es dient als Archiv für alle Arten von T_EX-Software, von der vollständigen T_EX-Distribution über Schriften und Anleitungen bis hin zu einzelnen Klassen- und Style-Dateien für eine Vielzahl von Anwendungen. Mittlerweile wird jedes neue Paket katalogisiert und in eine alphabetische Liste aufgenommen. Hier folgt jetzt eine Sortierung hinsichtlich der Anwendungsgebiete, denn dies ist schließlich das Kriterium, nach dem der T_EX-Anwender vorgeht, wenn er nach vorhandenen Paketen sucht.

Der T_EX Catalogue ist online unter <http://texcatalogue.sarovar.org/> verfügbar und umfasst derzeit etwa 1800 Einträge. Die jeweils aktuelle Fassung des hier vorgestellten »T_EX Catalog by Topic« ist unter <http://texcatalogue.sarovar.org/bytopic.html> verfügbar.

Die direkte Suche nach einem bestimmten Paket, dessen Namen man bereits kennt, beschreibt die FAQ von DANTE auf <http://www.dante.de/faq/de-tex-faq/html/de-tex-faq.html> unter 1.2.3 (*»Wie suche ich auf CTAN nach der Datei 'XYZ'? Ich kann ein Paket mit Endung '.sty' nicht finden.«*).

Während einer ftp-Sitzung kann man im Terminal mittels Eingabe von `quote site index paketname` eine Liste der Pfade auf CTAN abrufen, die zu dementsprechend benannten Dateien oder Verzeichnissen führen. Leichter zu bedienen ist die Suche unter <http://www.dante.de/cgi-bin/ctan-index>, einer graphischen Oberfläche zu dieser Funktion für WWW-Browser. Sie liefert also dasselbe Ergebnis.

Der Download von Paketen wird in der `de-tex-faq` unter 1.2.2 (auch wenn die Überschrift *»Wieso liegen auch Dateien, die zu einem Paket gehören, auf CTAN als Einzeldateien und nicht in gepackten Archivdateien?«* das nicht unbedingt nahelegt. . .) beschrieben. Zur Installation neuer Pakete siehe 5.1.4 (*»Wie installiert man am besten ein neues Paket, eine neue Klasse oder eine neue Schrift in einem bestehenden T_EX-System?«*).

Damit wird CTAN aber nur nach Dateinamen, nicht jedoch nach dem Verwendungszweck der Pakete erschlossen. Das leistet erst der T_EX Catalogue. Ruft man dessen Online-Version auf, so kann man entweder in der alphabetischen Liste auf <http://texcatalogue.sarovar.org/alpha.html> nachsehen, ob es auf CTAN ein Paket mit einem bestimmten Namen gibt, oder über den *Topic Index* nachsehen, ob es auf CTAN schon ein Paket für einen bestimmten Zweck gibt. Die einzelnen Pakete sind direkt mit den Einträgen im Katalog verlinkt. Für jedes Paket existiert eine eigene HTML-Datei mit einer kurzen Beschreibung des Pakets, über die der direkte Zugriff auf CTAN verlinkt ist, so dass man es direkt vom nächsten CTAN-Server herunterladen kann.

Wenn man also beispielsweise nach einer Klasse zum Schreiben von Briefen sucht und sich für `dinbrief` interessiert (vgl. S. 48 ff.), so gebe man `dinbrief` in die oben genannte Suchmaschine ein. Ergebnis: `dinbrief` findet sich im Verzeichnis <ftp://ftp.dante.de/tex-archive/macros/latex/contrib/dinbrief>.

Sowohl CTAN als auch der T_EX Catalogue werden laufend aktualisiert, wobei ältere Pakete erst nach und nach in die verschiedenen Kataloge übernommen werden können, da die Kurzbeschreibungen häufig erst erstellt werden müssen. So bleibt bis auf weiteres auch der *Topic Index* unvollständig. Vielleicht kann diese Veröffentlichung einen Anstoß zur vermehrten Mitarbeit der T_EX-User geben. Vorschläge zur Ergänzung werden vom Maintainer des Katalogs gerne entgegengenommen.

Ankündigungen neuer Pakete werden auf der `tex-announce` Mailing-Liste verbreitet, die man unter <http://tug.org/mailman/listinfo/tex-announce> abonnieren kann. Diese Announcements werden auch in die englische T_EX-Newsgruppe `comp.text.tex` gepostet. Wer sein System also stets auf dem neuesten Stand halten will, sollte diese Ankündigungen mitlesen (ca. 10 E-Mails pro Woche).

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References and manuals

- You should refer to »lshort« (p. 14) for the basic rules for writing correct L^AT_EX 2_ε.
- On the other hand, the most common mistakes in using L^AT_EX 2_ε and how to avoid them are listed in Mark Trettin's guide »l2tabu« (p. 15) available in German, English, French, and Italian.

- There are some \TeX resources online mostly outside CTAN that should be mentioned too.
- A comprehensive commented reference of the commands available both in \LaTeX or some of the most popular packages can be found at Michael Wiedmann's `tex-refs` project (<http://www.miwie.org/tex-refs/tex-refs.html>).
- Tutorials on \TeX by TUG India are available online (<http://www.tug.org.in/tutorials.html>) or as PDF (<http://sarovar.org/projects/ltxprimer>). There also is Peter Flynn's Beginner's Introduction available both online (<http://www.ctan.org/tex-archive/info/beginlatex/html/index.html>) and for download.
- For news on the development of \LaTeX see the \LaTeX 3 Project (<http://www.latex-project.org/>). The Con \TeX t project (p. 68), too, has a homepage (<http://www.pragma-ade.com/>) of its own.
- For practical hints on how to use \LaTeX in general as well as on particular packages refer to the »Frequently Asked Questions« lists of local \TeX Users Groups available on the WWW.
 - ▷ <http://www.fi.muni.cz/cstug/csfaq/>, Czech and Slovak
 - ▷ <http://www.ntg.nl/faq.html>, Dutch
 - ▷ <http://www.tex.ac.uk/cgi-bin/texfaq2html?introduction=yes>, English
 - ▷ <http://www.grappa.univ-lille3.fr/FAQ-LaTeX/index.php>, French
 - ▷ <http://www.dante.de/faq/de-tex-faq/html/de-tex-faq.html>, German
 - ▷ <http://obelix.ee.duth.gr/eft/greek/faq.html>, Greek
 - ▷ <http://www.guit.sssup.it/latex/latex.html>, Italian
 - ▷ <http://www.gust.org.pl/cototex.html>, Polish

Frequently asked questions

- `faq-de` – auf Deutsch
- `faq-es` – en Español
- `faq-fr` – en français
- `faq` – in English

Introduction to \LaTeX »lshort«

- `lshort-english` – a (Not So) Short Introduction to \LaTeX 2 ϵ
- `lshort-finnish` – Finnish version

- `lshort-french` – French version
- `lshort-german` – German version (\LaTeX 2 ϵ -Kurzbeschreibung)
- `lshort-italian` – Italian version
- `lshort-japanese` – Japanese version
- `lshort-mongolian` – Mongolian version
- `lshort-polish` – Polish version
- `lshort-portuguese-br` – Portuguese (Brazil) version
- `lshort-portuguese` – Portuguese version
- `lshort-russian` – Russian version
- `slovak-lshort` – Slovak version
- `lshort-spanish` – Spanish version
- `lshort-ukr` – Ukrainian version

Usage Guide »l2tabu«

- `l2tabu` – obsolete packages and commands (in German)
- `l2tabu-english` – English translation of `l2tabu`, an essential guide on the dos and don'ts of \LaTeX 2 ϵ
- `l2tabu-french` – French translation of `l2tabu`
- `l2tabu-italian` – Italian translation of `l2tabu`

Some more guides to \LaTeX

- `beginlatex` – a comprehensive beginner's guide to \LaTeX by Peter Flynn
- `catalogue` – the \TeX Catalogue of what's available on CTAN
- `french-translations` – French translation project for documentation of \LaTeX packages
- `gentle` – a gentle Introduction to \TeX
- `gentl-gr` – modern Greek translation of the gentle Introduction to \TeX
- `latex2e` – documentation on \LaTeX 2 ϵ in OS/2 hypertext format and HTML
- `russian-help` – \LaTeX help in Russian (p. 44)
- `simplified-latex` – a Simplified Introduction to \LaTeX
- `texbuch` – a summary in German of D. Knuth's " \TeX Book" by Fritz Cremer

Fonts and graphics

- **anleitung** – a german introduction by Jens Weissenburger to using TrueType fonts with L^AT_EX on a MiK_TE_X system with WinEdT
- **comp-fonts-faq** – frequently asked questions from the `comp.fonts` newsgroup
- **fontein** – a german translation of a guide by Javier Bezos on how to use fonts in L^AT_EX
- **fontinstallationguide** – how to install new fonts
- **fontname** – Karl Berry’s scheme for naming fonts in T_EX
- **grafik** – a guide by Marco Dübendorfer on how to produce EPS graphics files for use with L^AT_EX on MS Windows platforms
- **grfguide** – guide to using graphics in L^AT_EX, including documentation on various packages including `color` and `graphicx`
- **metafp** – some experiences with running METAFONT and METAPOST
- **METAPOST Examples** – example drawings using METAPOST
- **neufont** – a guide by Björn Lorenz on how to install new fonts (in german)
- **TrueType** – Harald Harders’ guide on how to use TrueType fonts with t_EX and dvips

Mathematics

- **amslatexprimer** – an introduction to $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX by Philip S. Hirschhorn
- **companion-rec** – a revised version of chapter 8 of the ‘L^AT_EX Companion’
- **Voss-Mathmode** – an introduction to math typesetting
- **Voss-Gauss** – an introduction to the `gauss` package
- **Voss-mathColor** – an introduction of using color inside math

For typesetting arrays see also the packages for tables (p. 27) and for formatting decimal columns (p. 27).

There are some guides on using L^AT_EX (p. 16) for mathematics.

$\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX

- **amsart** – a L^AT_EX document class for articles that is tailored to the design of American Mathematical Society publications
- **amsbook** – a L^AT_EX document class for books that is tailored to the design of American Mathematical Society publications

- **amslatex** – a collection of loosely related files that are distributed together by the American Mathematical Society, these files are miscellaneous enhancements to L^AT_EX whose aim is superior information structure of mathematical documents and superior printed output
- **amscd** – part of the $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX distribution, this package adapts the commutative diagram macros of $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX for use in L^AT_EX
- **amsmath** – the principal package in the $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX distribution
- **amsproc** – a L^AT_EX document class for conference proceedings that is tailored to the design of American Mathematical Society publications
- **amstext** – defines a `\text` macro, which makes it easy to incorporate fragments of text inside a displayed equation or a sub- or superscript
- **amsthm** – a L^AT_EX package that facilitates the kind of theorem setup typically needed in American Mathematical Society publications environments and to tag the equations therein

Support for $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX

- **empheq** – provides a visual markup extension to **amsmath**, see also package **mh**
- **gauss** – provides configurable tools for producing row and column operations on matrices a.k.a. Gaussian operations, see also p. 16
- **mathtools** – mathematical tools to use with **amsmath**; part of the **mh** bundle
- **mh** – a series of packages designed to enhance the appearance of documents containing a lot of math
- **ntheorem** – enhanced theorem environment, see also package **mh**
- **onlyamsmath** – inhibits the usage of plain T_EX and on demand of standard L^AT_EX math environments which is useful for class writers who want to force their clients to use the environments provided by the **amsmath** package
- **tex2ltx** – useful for converting plainT_EX($\mathcal{A}\mathcal{M}\mathcal{S}$) files into $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX and convert plain $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX bibliographic references into BibT_EX

The easy family of packages

- **easy** – a collection of »easy« to use macros
- **easybmat** – a simple package for writing block matrices with equal column widths or equal rows heights or both, with various kinds of rules between rows and columns

- `easyeqn` – a simple package for writing equations
- `easymat` – a simple package for writing matrices
- `easytable` – a simple package for writing tables
- `easyvector` – write vectors in a C-like fashion

Other math macros

- `accents` – multiple accents with nice features concerning creation of accents and placement of scripts
- `hhtensor` – provides commands for vectors, matrices, and tensors with different styles
- `mhequ` – simplifies the creation of multi-column equation
- `nath` – a L^AT_EX style to separate presentation and content in mathematical typography
- `tensind` – typesets tensors with dots filling gaps and fine tuning of index placement
- `tensor` – allows the user to set tensor-style super- and subscripts with offsets between successive indices
- `vector` – macros for more convenient representation of vectors in L^AT_EX_{2 ϵ} , both symbolically and as implicit or explicit rows/columns of elements

Math fonts

PostScript (p. 63) math fonts are supported by both the `mathpazo` package for Palatino and the `mathptmx` package for times which are part of the `psnfss` package (see the `psnfss` section (p. 39) for details)

- `a0poster` – provides fonts in sizes of 12pt up to 107pt and also makes sure that in math formulas the symbols appear in the right size (see also package `units`)
- `amsfonts` – extra mathematical symbols like blackboard bold letters (uppercase only)
- `concmath` – Concrete math fonts fraktur (p. 38) letters; subscript sizes of bold math italic and bold greek letters; subscript sizes of large symbols such as `sum` and `product`; added sizes of the Computer Modern (p. 33) small caps font; cyrillic fonts (p. 44); Euler math fonts
- `euler` – provides a setup for using the $\mathcal{A}\mathcal{M}\mathcal{S}$ Euler family of fonts for math in L^AT_EX documents

- `eulervm` – Euler virtual math fonts based on Euler and CM, compatible with `amsmath`
- `fourier` – a full replacement for the Computer Modern fonts
- `upgreek` – a package to provide the upright Greek letters from the Euler or Adobe Symbol fonts as additional math symbols, with proper scaling in super- and subscripts

Math graphics

- `circle` – provides circles in math mode that can be used for the nextstep operator of temporal logic, in conjunction with `\Box` and `\Diamond` (`latexsym`) or `\square` and `\lozenge` (`amssymb`)
- `sseq` – provides a new L^AT_EX environment for inline typesetting of spectral sequence charts; it is built on top of `xypic`
- `venn` – creating Venn diagrams with METAPOST
- `xypic` – a package for typesetting a variety of graphs and diagrams with T_EX

(L^A)T_EX on Windows

There are two important guides for installing L^AT_EX on Windows in German: Both Joachim Schlosser (<http://www.joachimschlosser.de/latexsystem>) and Viktor Witting, Maik Scherer, Florian Hibler, Johannes Schubert, Mathias Wasserthal, and Andreas Hirsch (<http://www.dante.de/help/documentation/miktex/>) provide rather good guides to installing a complete MiK_TE_X system on Windows.

- `anleitung` – a German introduction by Jens Weissenburger to using TrueType fonts with L^AT_EX on a MiK_TE_X system with WinEdT
- `win95-guide` – an installation-guide for a complete T_EX system consisting of MiK_TE_X, WinEdt and GhostView

Developing (L^A)T_EX packages

- How to package your \LaTeX package – tutorial on writing `.dtx` and `.ins` files
- `keyval` – makes options for macros available
- `xkeyval` – the extended version of `keyval`, allows key families

(\LaTeX) on the Web

- `acrotex` – how to generate PDF with \TeX
- `webguide` – brief guide to \LaTeX tools for web publishing

(\LaTeX) vs. word processors

LYX (p. 70) is an advanced alternative to word processors which is based on \LaTeX .

You may also input text using OpenOffice Writer (<http://www.openoffice.org>) and later convert it to \LaTeX or HTML with Henrik Just's Java-based `Writer2 \LaTeX` (<http://www.hj-gym.dk/~hj/writer2latex/>).

The TUG (<http://www.tug.org>) offers an overview of converters from PC Textprocessors to \LaTeX (<http://www.tug.org/utilities/texconv/pctotex.html>) and vice versa (<http://www.tug.org/utilities/texconv/textopc.html>). Some of the converters (p. 71) between \LaTeX and word processor formats can be found on CTAN.

- `latex4wp` – a \LaTeX guide specifically designed for word processor users

The symbols available in (\LaTeX)

- `symbols` – comprehensive list of \LaTeX symbols

Typesetting tables

- `tabsatz` – a tutorial by Axel Reichert on typesetting tables with some examples (in German)

TUGboat

- `tugboat-toc` – the complete accumulation of TUGboat tables of contents

Typography

- `typografie` – a tutorial on typography by Axel Reichert (in German)

Tips for using fancyhdr

- `fancyfolien` – a guide by Hans Friedrich Steffani on how to use the `fancyhdr` package (in German)

Tips for using floats

- `gleitobjekte` – tutorial from a DANTE meeting in November 1997 on floats and their placement, captions, inclusion of graphics, lettering of graphics, layout of tables and the presentation large amounts of numerical data (Axel Reichert)

Components of T_EX

- `components` – an introduction to the components and files users of T_EX get in contact with by Joachim Schrod

Donald Knuth's own documentation of T_EX and METAFONT

- `knuth` – Knuth's own documentation, including the T_EXbook and the METAFONT book

Alternative document classes

These class files provide an alternative to the usual L^AT_EX `article`, `report`, or book `classes`. They are used to change document layout in general and they usually provide some special features, as well. You should check the class file documentation first to make sure whether you can use options or commands that are part of the respective class file before considering the use of one of the packages listed below. There are some alternatives to `letter.cls` (p. 48), too, for writing letters and faxes. There are also classes for typesetting theses and papers (p. 52) for scientific journals. Some more classes which also might be of interest to general users of T_EX are listed under science (p. 52).

KOMA-Script

- `komascript` – a drop-in replacement for the article/report/book/letter classes with emphasis on European rules of typography and paper formats as laid down by Tschichold
- `typearea` – set page margins; part of the KOMA-Script bundle

Memoir

- `memoir` – typeset fiction, non-fiction, and mathematical books; provides a variety of predefined page, chapter and caption styles and easy means of creating new ones

NTG Class

- `ntgclass` – versions of the standard \LaTeX article and report classes, rewritten to reflect a more European design

Octavo

- `octavo` – a modification of the standard \LaTeX book class to typeset books following classical layout and design principles, implementing many of the proposals and insights especially of Jan Tschichold and Hugh Williamson

Refman

- `refman` – a document class for writing technical reference manuals offering a wide left margin for notes to the reader, like some of the manuals distributed by Adobe, available for articles and reports

Document structure

Document and section titles

- `alnumsec` – alphanumeric section numbering similar to `alphanum`, but you may use the standard \LaTeX sectioning commands
- `alphanum` – permits alphanumeric section numbering
- `sectsty` – control sectional headers
- `titlefoot` – add special material to footer of title page

- `titleref` – cross-reference section (and chapter, etc) titles and captions just like `\ref` and `\pageref`
- `titles` – defining macros that typeset the titles of books, journals, etc, and handle following spacing and punctuation intelligently
- `titlesec` – select alternative section titles
- `titletoc` – alternative headings for `toc/tof/tol`
- `titling` – control over the typesetting done by the `\maketitle` command

Abstract

- `abstract` – control the typesetting of the abstract environment

Table of contents

- `minitoc` – produce a table of contents for each chapter
- `multitoc` – set table of contents in multiple columns
- `shorttoc` – table of contents with different depths
- `titletoc` – alternative headings for `toc/tof/tol`
- `tocbibind` – add `bibliography/index/contents` to table of contents
- `tocloft` – control table of contents, figures, etc
- `tocvsec2` – section numbering and table of contents control
- `tubtoc` – tables of contents from TUGBoat

Changing the counting of chapters

- `alnumsec` – alphanumeric section numbering similar to `alphanum`, but you may use the standard \LaTeX sectioning commands
- `anonchap` – make `\chapter` be typeset like sections
- `alphanum` – permits alphanumeric section numbering
- `komascript` – a drop-in replacement for the `article/report/book` classes with emphasis on European rules of typography and paper formats as laid down by Tschichold
- `tocvsec2` – section numbering and table of contents control

Crossreferences

- `drftcite` – print the tags instead of the numbers for `\cite` and `\bibitem`
- `lastpage` – reference last page for »page N of M« type footers

- **prettyref** – additional functionality for the L^AT_EX 2_ε label–reference mechanism, allowing the »preformat« of all types of labels; compatible with hyperref and other packages
- **refcheck** – check references (in figures, table, equations, etc)
- **showkeys** – show label, ref, cite, and bib keys
- **titleref** – cross-reference section (and chapter, etc) titles, and captions just like `\ref` and `\pageref`
- **ut-backref** – a version of **backref** which adds to bibliography entries an entry saying where this particular reference was cited
- **varioref** – intelligent page references
- **xr** – references to other L^AT_EX documents

Footnotes and endnotes

There are some packages for working on critical editions (p. 58) for those interested in the Humanities (p. 58).

- **endnotes** – accumulates footnotes and places them at the end of the document
- **fixfoot** – multiple use of the same footnote text
- **fnpara** – typeset footnotes in run-on paragraphs, instead of one above another
- **footbib** – a package to put bibliographic references as footnotes
- **footmisc** – sets via package options much (if not all) of the functionality of the various other footnote packages
- **footnpag** – allows footnotes on individual pages to be numbered starting from 1, rather than being numbered sequentially through the document
- **ftn** – L^AT_EX document-style option to make footnotes available in any environment, except inside floats
- **ftnright** – footnotes in two-column documents
- **manyfoot** – add footnote levels to the standard L^AT_EX's footnote mechanism
- **nccfoots** – implements commands for generating footnotes marked by hand
- **savefnmark** – save name of the footnote mark for reuse
- **titlefoot** – add special material to footer of title page
- **yafoot** – enclose footnote numbers within a page; control the position of footnotes; and make footnotes double-columned

Appendix

- `appendix` – extra control of appendices

Formatting

Enumerating and listing Items

- `enumerate` – adds an optional argument to the `enumerate` environment which determines the style in which the counter is printed
- `enumitem` – control layout of `itemize*`, `enumerate`, `description`
- `expdlist` – provides additional features to the L^AT_EX `description` environment, such as changing the left margin, or breaking a list for a comment without touching any counters
- `mdwtools` – a collection of tools that also includes support for list handling
- `multenum` – multi-column enumerated lists
- `paralist` – provides `enumerate` and `itemize*` environments that can be used within paragraphs to format the items either as running text or as separate paragraphs with a preceding number or symbol
- `savetrees` – pack as much text as possible onto each page of a L^AT_EX document

Verbatim input and simulating the typewriter

- `alltt` – a verbatim environment in which other commands and environments can appear
- `explain` – extended version of the plain format
- `fancyvrb` – sophisticated handling of verbatim text
- `moreverb` – extended verbatim
- `url` – verbatim with URL-sensitive line breaks
- `verbatim` – the L^AT_EX `verbatim` environment
- `vr` – verbatim macros via plain T_EX

Underlining, letterspacing etc

- `soul` – hyphenation for letterspacing, underlining, and more
- `ulem` – package for underlining
- `umoline` – underlines text allowing line breaking
- `underlin` – package for underlining

Quoting

- `csquotes` – provides commands for smart, or ‘context-sensitive’ quoting
- `listings` – typesets program code within L^AT_EX using different styles, e.g., default is bold for keywords, italic for comments and no special style for strings, including support for `hyperref`
- `quotchap` – creating decorative chapter headings with quotations
- `quotes` – translates plain text input into English quotes ‘...’

Page layout

Page margins

- `a4` – support for A4 paper sizes
- `a4wide` – increases width of printed area of an A4 page
- `a5` – obsolete support for A5 paper size A4
- `a5comb` – support for A5 paper sizes superseded by the `geometry` package
- `chnpage` – change the page layout in the middle of a document
- `fullpage` – sets all four margins to be either 1 inch or 1.5 cm and specifies the page style
- `geometry` – flexible and complete interface to document dimensions
- `typearea` – set page margins; part of the KOMA-Script bundle
- `vmargin` – set various dimensions

Page headings

- `fancyhdr` – extensive control of page headers and footers in L^AT_EX 2_ε
- `fancyfolien` – a guide by Hans Friedrich Steffani on how to use the `fancyhdr` package (in German)

Landscape format

- `lscope` – place selected parts of a document in landscape

Page numbers

- `lastpage` – reference last page for »page N of M« type footers

Line and paragraph numbers

There are packages for working on critical editions (p. 58).

- **lineno** – line numbers on paragraphs
- **numline** – macros for numbering lines

Columns in a page

- **balance** – balanced two-column mode
- **cuted** – mixing one-column and two-column modes at any place of page
- **fix2col** – fix miscellaneous two-column mode features
- **flushend** – columns balancing at last page
- **ftnright** – footnotes in two-column documents
- **mhequ** – multicolumn equations, tags, labels, sub-numbering
- **midfloat** – mixing one-column and two-column modes at any place of page
- **multicol** – intermix single and multiple columns
- **parallel** – typesetting two languages side-by-side

Tables

See also packages for floats (p. 29). There are guides to typesetting tables (p. 20). There is Calc2L^AT_EX (<http://web.hc.keio.ac.jp/~mr041754/calc2latex/>) for converting OpenOffice spreadsheets to L^AT_EX tables.

Typesetting long tables

- **longtable** – support for tables longer than a page (generally easier to use and more flexible than **supertabular**)
- **ltxtable** – **longtable** and **tabularx** merge
- **supertabular** – a multi-page tables package
- **xtab** – an extended version of **supertabular** to automatically break tables across pages and includes extra functionality

Formatting decimal columns

- **dcolumn** – align on the decimal point of numbers in tables
- **numprint** – print numbers with a separator every three digits

- `rccol` – provides right-centered numbers; furthermore, rounding to the desired precision is possible
- `warpcol` – defines a tabular column type for formatting numerical columns in L^AT_EX

Adding some colour to tables

There are packages for colour and shading (p. 64) in general.

- `colortab` – shade or colour cells of tables
- `colortbl` – allows rows and columns to be coloured and even individual cells
- `shadbox` – shade the background of any box (text, figure, table, etc)

Misc

- `array` – arrays and tables with formatted columns
- `Array Maker` – a program for making L^AT_EX and xypic arrays
- `blkarray` – extended `array` and `tabular`
- `booktabs` – nicer layout of tables
- `cellular` – cellular table construction
- `csvtools` – allows you to repeatedly perform a set of L^AT_EX commands on data in each row of a comma separated variable (CSV) file
- `easybmat` – writing block matrices with equal column widths or equal row heights or both, with various kinds of rules between rows and columns
- `easyeqn` – introduces some `equation` environments that simplify writing of equations
- `easytable` – tables with equal column widths or equal row heights or both, with various kinds of rules (lines) between rows and columns
- `Excel-to-LaTeX` – convert Excel spreadsheets to L^AT_EX tables (works with Excel up to Excel 97)
- `ftcap` – allows `\caption` at the beginning of a `table` environment
- `LaTable` – a near-WYSIWYG editor for L^AT_EX tables
- `ltablex` – modifies the `tabularx` environment to combine the features of the `tabularx` package (auto-sized columns in a fixed width table) with those of the `longtable` package (multi-page tables)
- `multirow` – creates tabular cells spanning multiple rows
- `savefnmark` – save name of the footnote mark for reuse
- `tbls` – better vertical spacing in tables and arrays (tabular lineskip)

- `tabularx` – tabulars that widen automatically
- `tap` – an easy T_EX macro package for typesetting complex tables
- `threeparttable` – tables with captions and notes, all of the same width
- `hhline` – better horizontal lines in tabulars and arrays

Floats

See also the packages for including graphics (p. 60) and tables (p. 27).

- `caption` – extends caption capabilities for figures and tables
- `ccaption` – continuation headings and legends for floats
- `dpfloat` – support for double-page floats
- `endfloat` – move floats to the end with markers where they belong
- `figcaps` – collect figure captions for later printing
- `float` – improved interface for floating objects (defining your own floats and improving the behaviour of the old ones)
- `floatfig` – allows text to be wrapped around figures
- `floatflt` – float text around figures and tables which do not span the full width of a page
- `here` – provides the H option for floats in L^AT_EX to mean that the float should really be placed here
- `nonfloat` – non-floating table and figure captions
- `photo` – a float environment for photographs
- `refcheck` – check references (in figures, table, equations, etc)
- `rotfloat` – a package for rotating floats
- `subfigure` – generates sub-figures within one normal figure
- `subfloat` – enables sub-numbering of different floats (figures and tables) similar to the subequations divided into subfigures
- `topcapt` – place captions above figures and tables
- `wrapfig` – produces figures which text can flow around
- `hvfloat` – rotating floats with captions in different ways

Creating indices and glossaries

- `acronym` – ensures that all acronyms used in the text are spelled out in full at least once; provides an environment to build a list of acronyms
- `appendix` – extra control of appendices
- `esindex` – typset index entries in spanish documents
- `gloss` – create glossaries using B_IB_TE_X

- `glostex` – automatic preparation of glossaries; combines the functionality of `acronym` and `nomencl`
- `index` – extended index for L^AT_EX including multiple indexes
- `makeglos` – include a glossary into a document
- `makeidx` – standard L^AT_EX package for creating indexes
- `makeindex` – a general purpose hierarchical index generator
- `nomencl` – produce lists of symbols as in nomenclature using the `makeidx` program
- `toolbox` – a package for (L^A)T_EX which provides some macros which are convenient for writing indices, glossaries, or other macros

Bibliography

For showing `\cite` and `\bibitem` crossreferences (p. 23) use the `drftcite` package.

B_IB_ET_EX

- `bibtex` – bibliography management for L^AT_EX
- `bibtex8bit` – a fully 8-bit adaptation of B_IB_ET_EX0.99
- `camel` – comprehensive bibliography manager (prototype citation engine for L^AT_EX3 (<http://www.latex-project.org>) that will become B_IB_ET_EX1.0 on release
- `macbibtex` – a port of `bibtex` which is distributed with O_ZT_EX for the Macintosh OS 68

Multilingual bibliographies

- `babelbib` – generate multilingual bibliographies in cooperation with `babel`

Multiple bibliographies in a document

- `bibtopic` – include multiple »by topic« bibliographies in a document
- `bibunits` – multiple bibliographies in one document; compatible with KOMA-Script
- `chapterbib` – separate bibliography for each `\include` file

Some more additional packages

- **bibhtml** – consists of a Perl (p. 73) script and a $\text{BIB}\TeX$ style file, which together allow to compile a bibliography for a collection of HTML files
- **bibsort** – sort a bibliography
- **chbibref** – change the bibliography/references title
- **cite** – supports compressed, sorted lists of numerical citations
- **citeref** – support backward references in the bibliography
- **compactbib** – allows many thebibliography environments with continuous numbering
- **easybib** – macro package for writing custom bibliographies with a simple $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\TeX$ -like syntax
- **explain** – extended version of the plain format, adding support for bibliographies, tables of contents, enumerated lists, verbatim input of files, numbered equations, tables, two-column output, footnotes, and commutative diagrams
- **footbib** – put bibliographic references as footnotes
- **listbib** – lists contents of $\text{BIB}\TeX$ files for archival purposes
- **notoccite** – prevent erroneous numbering of cites when using $\text{BIB}\TeX/\text{unsrt}$
- **tocbibind** – add bibliography/index/contents to table of contents (p. 23)
- **ut-backref** – a version of backref which adds to bibliography entries an entry saying where this particular reference was cited

Bibliography styles

For using $\text{BIB}\TeX$ for working in the humanities (p. 58) see the bibliography section there (p. 58).

- **achicago-bst** – produces bibliographies based on »The Chicago Manual of Style«, requires the **achicago** package
- **achicago** – produces author-date citations based on »The Chicago Manual of Style«
- **authblk** – redefines the $\backslash\text{author}$ command to work as normal or to allow a footnote style of author/affiliation input
- **authorindex** – generates a list of all authors cited in a document along with a list of pages where these citations occur
- **bibarts** – a package to assist in making bibliographical lists common in the arts

- **biblio** – an extensive collection of B_IB_TE_X bibliographies on many topics and for many journals
- **biblist** – B_IB_TE_X styles by Joachim Schrod
- **chicago** – a bibliography style
- **chem-journal** – various B_IB_TE_X formats for journals in Chemistry (p. 56), including Reviews in Computational Chemistry, Journal of Physical Chemistry, Journal of Computational Chemistry and Physical Chemistry Chemical Physics
- **custom-bib** – generates customized B_IB_TE_X bibliography styles from a generic file using **docstrip**, includes support for the Harvard style
- **dinat** – bibliography style files intended for texts in German in accordance with the german DIN 1505, parts 2 and 3
- **germbib** – German variants of standard B_IB_TE_X styles
- **harvard** – the Harvard bibliography style family
- **jtbnew** – B_IB_TE_X style for Journal of Theoretical Biology
- **jurabib** – B_IB_TE_X databases for German legal texts in the first place, but also of interest to everyone else working in the humanities (p. 58)
- **natbib** – bibliography style with author-year and numbered references

Tools for managing your bibliography

- **barracuda** – a B_IB_TE_X database manager that allows loading, editing, merging, sorting, searching, printing, and saving of B_IB_TE_X database files
- **bibdb** – B_IB_TE_X bibliography manager for MS-Windows and MS-DOS
- **bibfind** – reads the bib file and prints those references that match your search string
- **bibindex** – a stand-alone tool for indexing B_IB_TE_X documents to be searched using the corresponding biblook tool
- **biblook** – a stand-alone tool for searching B_IB_TE_X documents which have been indexed by **bibindex**
- **biblio-perl** – a program for preprocessing bibliographic references (written in Perl (p. 73))
- **biblios** – a MS-Windows95 tool that uses the CGI protocol so that B_IB_TE_X files can be managed remotely using an HTTP server on the server side and a web-browser on the client side
- **bibtool** – command line manipulation of B_IB_TE_X
- **bibtools** – bib management tools, including a bib2html converter and a style file for listing papers on a homepage/cv (p. 49)
- **bibweb** – automatically retrieve bibliography from MathSciNet

- **bidstobibtex** – a tool to take input from a BIDS email message (generated using one of the downloading formats) to BibT_EX
- **bt00L** – Perl (p. 73) library for parsing and processing BibT_EX files
- **citation** – a bibliographical conversion program
- **pybliographer** – a comprehensive tool for managing bibliographic databases on *ix platforms
- **tex2bib** – converts bibitems embedded in a document to bib format
- **tex2ltx** – useful for converting plain T_EX ($\mathcal{A}\mathcal{M}\mathcal{S}$) files into $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX and converting plain $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX bibliographic references into BibT_EX
- **bibexport** – this is a shell script using BibT_EX to extract .bib entries that are \cite'd in a document; it also permits to expand a BibT_EX file, i.e. to develop abbreviations (except standard ones) and crossrefs

Fonts

See also PostScript support (p. 39) and creation of PDF documents (p. 40). PostScript Type 1 (p. 35) and Type 3 (p. 36) fonts are listed in this section. There are guides (p. 16) on using different types of fonts.

Computer Modern fonts

- **bluesky** – Computer Modern family in Type 1 format
- **cm** – Computer Modern fonts; the typical (L^A)T_EX typeface designed by Donald Knuth
- **cmcyr** – Computer Modern fonts extended with russian letters, in METAFONT sources and ATM Compatible
- **cmextra** – extra Computer Modern fonts, from the American Mathematical Society
- **cmolddig** – a virtual fount setup for using old style digits by default with the OT1 encoded Computer Modern roman upright founts
- **cmpica** – a Computer Modern pica variant
- **cmpr** – versions of PostScript fonts, from Blue Sky and Y&Y
- **cmsd** – a package including additional fd files, providing an alternative interface to the CM sans serif boldface fonts
- **cmtt** – a package for handling the ‘cmtt’ font better
- **zefonts** – virtual T1 encoded Computer Modern fonts based on (OT1) Computer Modern, Times, and Helvetica fonts, intended to simulate ‘dc’ fonts

Extended computer fonts

- **ec** – the European Computer Modern fonts supporting the complete L^AT_EX T1 encoding defined at the 1990 TUG conference held at Cork/Ireland
- **ecc** – the METAFONT sources and tfm files of the European Concrete fonts; this is the EC implementation of Knuth’s Concrete (p. 34)
- **eco** – a set of font metric files and virtual fonts for using the ec fonts with oldstyle numerals fonts, including also the corresponding Text Companion fonts
- **hfoldsty** – old style numerals with EC fonts
- **ec-plain** – a plain-like format using the ec fonts including an extended math italic font (**exmi**) providing upright greek (p. 45) letters
- **fontenc** – standard package for activating ec fonts
- **tienc** – obsolete package for activating ec fonts

Text Companion fonts

- **ecc** – the METAFONT sources and tfm files of the European Concrete fonts; this is the EC implementation of Knuth’s Concrete fonts (p. 34), including also the corresponding text companion fonts
- **textcomp** – the Text Companion fonts which provide many text symbols (such as baht, bullet, copyright, musicalnote, onequarter, section, and yen) in the TS1 encoding

The Concrete fonts

- **beton** – typeset a L^AT_EX 2_ε document with the Concrete fonts designed by Don Knuth and used in his book »Concrete Mathematics«
- **ccfonts** – L^AT_EX font definition files for the Concrete fonts and a L^AT_EX package for typesetting documents using Concrete as the default font family; the files support OT1, T1, TS1, and Concrete math including \mathcal{AMS} fonts
- **cc-pl** – Polish extension of Computer Concrete fonts (METAFONT sources)
- **cc-plps** – Polish extension of Computer Concrete fonts in Type 1 format
- **concrete** – Concrete roman fonts, designed by Donald E. Knuth, originally for use with Euler math fonts

- **concrete-wrap** – a wrapper for loading the appropriate packages to use the Concrete fonts
- **ecc** – the METAFONT sources and tfm files of the European Concrete fonts; this is the EC implementation of Knuth's Concrete fonts (p. 34), including also the corresponding text companion fonts
- **euler** – provides a setup for using the $\mathcal{A}\mathcal{M}\mathcal{S}$ Euler family of fonts for math in L^AT_EX documents

CM-super fonts

- **cm-super** – CM-super family of fonts in Type 1 format

Latin modern fonts

- **lm** – latin modern fonts in Type 1 format

$\mathcal{A}\mathcal{M}\mathcal{S}$ fonts for mathematical typesetting

- **amsfonts** – augments the standard set normally distributed with T_EX, including: extra mathematical symbols; blackboard bold letters (uppercase only); fraktur (p. 38) letters; subscript sizes of bold math italic and bold Greek letters; subscript sizes of large symbols such as sum and product; added sizes of the Computer Modern (p. 33) small caps font; cyrillic (p. 44) fonts (from the University of Washington); Euler math fonts
- **euler** – provides a setup for using the $\mathcal{A}\mathcal{M}\mathcal{S}$ Euler family of fonts for math in L^AT_EX documents

PostScript Type 1 fonts

- **brushscr** – BrushScript fonts including pbsi, a Type 1 PostScript font containing BrushScript italic characters that simulates hand-written characters
- **cmbright** – a family of sans serif fonts for T_EX and L^AT_EX, based on Donald Knuth's CM fonts; it comprises OT1, T1, and TS1 encoded text fonts of various shapes as well as all the fonts necessary for mathematical typesetting, incl. $\mathcal{A}\mathcal{M}\mathcal{S}$ symbols. This collection provides all the necessary files for using the fonts with L^AT_EX
- **mf2pt1** – produce PostScript Type 1 font from METAFONT (p. 36) source

PostScript Type 3 fonts

- `mf2pt3` – Perl (p. 73) script to generate PostScript Type 3 fonts from METAFONT (p. 36) sources by processing METAPOST output

TrueType fonts

- `freetype` – a free, full-featured TrueType rasterizer library
- `ttf2mf` – MS program to convert TrueType to METAFONT (p. 36)
- `ttf2pk` – this tool rasterizes the glyph outlines of a TrueType font into a bitmap font in PK format as part of the FreeType package
- `ttf2pt1` – a tool that converts TrueType fonts into PS Type 1 fonts (p. 35)
- `ttf2tex` – a shell script which will create all files necessary to use TrueType fonts with $\text{te}\TeX$ from a set of TTF files
- `ttf2tfm` – extracts the metric and kerning information of a TrueType font and converts it into metric files usable by \TeX (quite similar to `afm2tfm` which is part of the `dvips` package)
- `ttftogf` – convert MS-Windows TrueType fonts to GF format

METAFONT and METAPOST

- `emp` – a package for encapsulated METAPOST pictures in $\text{L}\text{A}\text{T}\text{E}\text{X}$
- `meta-mode` – a GNU Emacs Lisp package that implements a major mode for editing METAFONT or METAPOST sources
- `metapost` – a tool based on METAFONT for producing precise technical illustrations, creating scalable PostScript instead of bitmaps
- `metapost-examples` – example drawings using `metapost`
- `mf2pt1` – produce PostScript Type 1 fonts from METAFONT (p. 36) source
- `mf2pt3` – Perl (p. 73) script to generate PostScript Type 3 fonts from METAFONT (p. 36) sources by processing METAPOST output
- `threed` – create animations of 3-dimensional objects (such as polyhedra) in `metapost`

Symbol fonts

The PostScript (p. 39) symbol fonts Zapf Dingbats are supported by the `pifont` package which is part of `psnfss`.

- `marvosym` – Martin Vogel’s symbols (`marvosym`) font

- **marvosym-mac** – a Macintosh version of the marvosym font
- **textcomp** – the Text Companion fonts (p. 34) which provide many text symbols (such as baht, bullet, copyright, musicalnote, onequarter, section, and yen) in the TS1 encoding
- **wasysym** – extra characters from the Waldis symbol fonts

The »Euro« Currency Symbol €

- **euro** – converts arbitrary national currency amounts using the euro as base unit and typesets automatically monetary amounts in almost any desired way; conversion rates for the so-called Euro zone countries are already built-in
- **eurofont** – provides a command that prints a euro symbol
- **europs** – provides access to Adobe’s Euro currency symbol fonts from L^AT_EX
- **eurosans** – provides a convenient interface for using the free Adobe Type 1 PostScript euro fonts
- **eurosym** – the new European currency symbol for the »Euro« implemented in METAFONT, using the official European Commission dimensions and providing several shapes
- **marvosym** – Martin Vogel’s symbols (marvosym) font
- **marvosym-mac** – a Macintosh version of the marvosym font
- **textcomp** – the Text Companion fonts (p. 34) which provide many text symbols (such as baht, bullet, copyright, musicalnote, onequarter, section, and yen) in the TS1 encoding

Typesetting barcode

- **barcode2** – typesetting barcode
- **barcodes** – fonts for making barcodes
- **code128** – a set of barcode macros for the Code 128 standard
- **ean** – font for making EAN barcodes
- **wbarcode** – typeset common (and less common) barcodes with T_EX

Typesetting initials

- **dropcaps** – use dropped capitals to start a paragraph in L^AT_EX 2.09

- **dropping** – a $\LaTeX 2_\epsilon$ macro for dropping the first character(s) (or word(s)) of a paragraph, extending the $\LaTeX 2.09$ package `dropcaps` and automatically taking care of finding the font name
- **gothic** – gothic and ornamental initial fonts by Yannis Haralambous
- **initials** – a special font (`yinit`) is defined to be used for initial dropped capitals
- **lettrine** – supports various dropped capitals styles, typically those described in the French typographic books

Historic fonts

Antiquity and early age

- **hieroglf** – a METAFONT version of about 75 Egyptian hieroglyphs, but the package is not for serious Egyptologists
- **hierotex** – a package for typesetting ancient egyptian hieroglyphs which contains a hieroglyphic font, a number of style files, and a helper program in C that allows one to type hieroglyphic texts using the so-called »manuel de codage«, which is the current standard for encoding ancient Egyptian; also includes the Type 1 fonts for creating PDF files
- **hieroglyph** – hieroglyph fonts and other support
- **MNTTeX-tools** – The Secret History of the Mongols (Monggol-un niguca tobciyan → MNT) is the oldest work of Mongolian literature surviving today; though the language of the text is Middle Mongolian, the text was written entirely in Chinese characters which were used to render Mongolian phonetically
- **ibycus** – Ibycus 4 system, a collection of fonts and macros to typeset ancient Greek; the bold Ibycus font is now available in PostScript format

Gothic fonts

- **blackletter1** – a gothic font
- **cmfrac** – reencoded versions of Haralambous fraktur fonts
- **gothic** – gothic and ornamental initial fonts by Yannis Haralambous
- **mfnfss** – packages to type oldgerman or pandora fonts in \LaTeX
- **yfonts** – a \LaTeX interface to the old-German fonts designed by Yannis Haralambous: Gotisch, Schwabacher, Fraktur and the baroque initials

Typesetting handwriting

- **augie** – a calligraphic font for simulating informal handwriting
- **brushscr** – BrushScript fonts including pbsi, a Type 1 PostScript font containing BrushScript Italic characters that simulates hand-written characters
- **calligra** – calligraphic font in the handwriting style of the author, Peter Vanroose, which may be used with the fundus (p. 39) package
- **schwell** – calligraphic font for typesetting handwriting in Schwell fonts
- **suetter1** – calligraphic font for typesetting handwriting in Sütterlin fonts
- **twcal** – a calligraphic font which may be used for typesetting what is called the »vereinfachte Ausgangsschrift« in German used in school books

Installing fonts

- **fontinst** – T_EX macros for converting Adobe Font Metric files to T_EX metric and virtual font format
- **fontinstallationguide** – how to install new fonts

Misc

- **fundus** – providing L^AT_EX access to various font families

PostScript Support

PostScript Type 1 (p. 35) and Type 3 (p. 36) fonts are listed in the fonts (p. 33) section.

dvips

- **dvips** – a DVI to PostScript driver by Tom Rokicki
- **dvipsk** – convert DVI to PostScript with KPSE search path
- **dvips-os2** – OS/2 executable for **dvips**
- **dvips-shell** – a **dvips** shell for MS-Windows32

psnfss

The **psnfss** packages mathppl, mathptm, palatino, utopia, and times are obsolete and hence should not be used any more.

- `lw35nfsx` – L^AT_EX p`snfss` support for the 35 printer resident PostScript fonts using LY1 text font encoding, employing the Berry names
- `ly1` – the Y&Y texnansi (T_EX 'n ANSI) encoding
- `psnfss` – font support for common PostScript fonts, including font definition files, macros, and font metrics for common PostScript fonts using the New Font Selection Scheme, or NFSS2, originally implemented by Sebastian Rahtz; implements the following style files: `avant`, `bookman`, `chancery`, `charter`, `courier`, `helvet`, `mathpazo`, `mathptmx`, `newcent`, `pifont`, and `fourier`
- `psnfss-source` – sources (makefiles and fontinst scripts) of the `psnfss`
- `psnfssx` – extra styles and encodings for PS fonts, including Y&Y encoding support

PSTricks

PSTricks has its own homepage <http://PSTricks.de>. There are more packages for drawing circuit diagrams (p. 62) and for working in the field of electronics (p. 56).

- `PSTricks` – an extensive collection of PostScript macros that is compatible with most T_EX macro packages, used for drawing technical and mathematical 2- and 3-dimensional diagrams

Misc

- `pslatex` – a small package that makes L^AT_EX default to »standard« PostScript fonts; it is basically a merger of the obsolete `times` and `mathptm` styles from the `psnfss` suite of packages and hence should not be used any more

Creating PDF documents

pdfT_EX

- `pdftex` – an extension of T_EX which directly generates PDF documents instead of DVI
- `pdftex_oztex` – pdfT_EX designed to run with OzT_EX

Packages for special PDF features

- `hyperref` – extensive support for hypertext in L^AT_EX
- `pdfcprot` – activating and setting of character protruding using pdfL^AT_EX
- `microtype` – an interface to the micro-typographic extensions of pdfT_EX
- `pdfcrop` – crop PDF graphics
- `pdfcrypt` – allows the setting of PDF encryption options for pdfT_EX and V_TE_X, no more supported by newer pdfT_EX versions
- `pdfpages` – include pages from external PDF documents in L^AT_EX documents
- `pdfscreen` – an extension of the `hyperref` package to provide a screen-based document design
- `pdfslide` – make nice presentation slides using pdfT_EX
- `pdftricks` – support for `ps tricks` in pdfT_EX
- `thumbpdf` – provides support, using Perl, for thumbnails in pdfT_EX and `dvips/ps2pdf`
- `ps4pdf` – provides a new way to use PostScript commands (e.g., `PSTricks` graphics, `PSfrag` replacements, EPS graphics) inside a pdfL^AT_EX processed document; you need recent versions of the L^AT_EX packages `preview`, `ifpdf`, `ifvtex` and a new L^AT_EX base installation
- `movie15` – a multimedia inclusion package for self-contained PDF's (works also with `dvips`→`ps2pdf`)

Fonts for PDF files

- `ae` – virtual fonts for PDF files with T1 encoded CMR-fonts
- `aeguill` – a package adding several kinds of guillemets to the `ae` fonts

PDF viewers and tools

- `acroread` – a tool from Adobe for reading Adobe PDF (p. 40) files available for a variety of architectures
- `xpdf` – previewing and manipulating of PDF files available on most platforms

Combining documents

For linking documents by crossreferences (p. 23) use package `xr`. See also managing large documents (p. 43).

- `combine` – bundle individual documents into a single document, such as when preparing a conference proceedings
- `csvtools` – allows you to repeatedly perform a set of L^AT_EX commands on data in each row of a comma separated variable (CSV) file
- `dviconcat` – concatenates DVI files
- `dvicopy` – copy and concatenate DVI files
- `pdfpages` – include pages from external PDF documents in L^AT_EX documents
- `textmerg` – merge text in T_EX and L^AT_EX (useful, for example, in mail merge)

Bundling all packages necessary for compiling a document

- `bundledoc` – bundle together all the files needed to build a L^AT_EX document
- `snapshot` – list the external dependencies of a L^AT_EX document

Managing different versions of your document

- `draftcopy` – places the word DRAFT (or other words) in light grey diagonally across the background (or at the bottom) of each (or selected) pages of the document
- `pdfdraftcopy` – a package derived from the `draftcopy` package for use with pdfT_EX
- `prelim2e` – allows the marking of preliminary versions of a document, by default marking the document as draft and putting a timestamp on it; can be used together with e.g. the `vrision`, `rcs`, and `rcsinfo` packages, and it may be used with the `scrtime` package from the KOMA-Script bundle
- `rcs` – use RCS (revision control system) tags in L^AT_EX documents
- `rcsinfo` – a package to extract RCS (Revision Control System) information and use it in a L^AT_EX document
- `svn` – lets you typeset (in L^AT_EX) the value of Subversion keywords; the package is approximately equivalent to the RCS package but intended for use with subversion (<http://subversion.tigris.org/>)
- `vrision` – add version number to DVI file

Managing large documents

See also combining documents (p. 41).

- `chapterfolder` – provides a macro to define `chapter/section/subsection` folders that contain the files for `chapter/section/subsection` and provides a macro that allows inclusion without using the full path
- `import` – allow input of a file with its own inputs from another directory

Multilingual support

Try the `parallel` package for typesetting bilingual versions of a text side by side in two columns. `parrun` may be useful for typesetting two streams of text running parallel one above the other. There are packages for typesetting critical editions (p. 58), too. You may also typeset bilingual dictionaries (p. 58) using L^AT_EX 2_ε.

Omega (p. 69) is intended for multilingual typesetting, supporting unicode and bi-directional typesetting.

The `babel` package

- `babel` – this package currently provides support for 41 languages, both modern and ancient; it should be used whenever possible as `babel` is available on all L^AT_EX systems

Multilingual bibliographies

- `babelbib` – generate multilingual bibliographies in cooperation with `babel`

Supported languages

For information on Chinese T_EX see the C_TE_X homepage <http://www.ctex.org/>.

- `arabtex` – macros and fonts for typesetting Arabic
- `armenian` – write in Armenian with T_EX
- `armtex` – an Armenian system for T_EX/L^AT_EX 2_ε/METAFONT
- `bahyph` – hyphenation patterns for basque

- **bangtex** – class files for writing Bangla and Asamese with L^AT_EX
- **arosgn** – support for the Bengali language
- **pandey** – support for the Bengali language
- **burmese** – basic support for writing Burmese with L^AT_EX (requires Perl, p. 73)
- **catalanbib** – BibT_EX bibliographic styles for the Catalan language
- **casyl** – typeset Cree/Inuktitut in Canadian Aboriginal Syllabics
- **cherokee** – fonts for typesetting Cherokee
- **ocherokee** – typesetting the Cherokee language with the Omega (p. 69) version of L^AT_EX
- **china2e** – a L^AT_EX package to produce Chinese calendar symbols of the old Chinese lunisolar calendar
- **CJK** – a macro package which enables the use of Chinese, Japanese, and Korean with L^AT_EX 2_ε
- **CJK-fonts** – fonts to go with the CJK macro package for Chinese, Japanese, and Korean with L^AT_EX 2_ε
- **manju** – Manju language support
- **copte** – coptic fonts
- **CBcoptic** – this bundle provides Coptic fonts in METAFONT source and in pfb Type 1 format and the necessary files for using them in a L^AT_EX environment, with a certain amount of macros for philological applications
- **croatian** – fonts for typesetting Croatian scripts
- **ascii-cyrillic** – a converter for 8-Bit Russian and Ukrainian text to the latin alphabet (7-Bit ASCII)
- **cmcyr** – Computer Modern fonts extended with Russian letters, in METAFONT sources and ATM Compatible
- **cmcyralt** – alternative Russian encoding support
- **CyrTUG** – the CyrTUG distribution for emtex
- **lh** – the lh fonts for the ‘T2’/X2 encodings
- **izhitsa** – support for the old Russian font »Izhitsa«
- **ot2cyr** – macros to use the OT2 Cyrillic encoding
- **czech** – typeset Czech documents
- **csfonts** – Czech/Slovak-tuned METAFONT Computer Modern fonts
- **cslatex** – L^AT_EX support for Czech/Slovak typesetting
- **csplain** – plain T_EX support for Czech/Slovak typesetting
- **cspsfonts** – Czech and Slovakian PostScript fonts
- **czhyph2e** – a Perl script `czhyph2e.pl` by Werner Lemberg which converts the Czech hyphenation pattern as distributed on the CTAN network from

the PC encoding into a form usable by $\LaTeX 2_{\epsilon}$ with T1 font encoding (DC fonts)

- **sihyph23** – Slovene hyphenation patterns
- **slovak** – typeset Slovakian documents
- **devanagari** – Frans Velthuis' preprocessor for Devanagari text and fonts and macros to use when typesetting the processed text
- **ntgclass** – versions of the standard \LaTeX article and report classes, rewritten to reflect a more European design, by the Dutch \TeX Users Group
- **epiolmec** – typesetting the Epi-Olmec language used in Southern Middle America until about 500 AD
- **enthiop** – Ethiopian language support for the **babel** package, including a collection of fonts and \TeX macros for typesetting the characters of the languages of Ethiopia, with fonts based on Eth \TeX originally distributed by Abass B. Alamnehe
- **aeguill** – a package adding several kinds of guillemets (Polish **cmr**, cyrillic **cmr**, **lasy**, and **ec**) to the **ae** fonts; it is useful if you are using the **ae** fonts to produce PDF (p. 40) files, since the additional guillemets exist in Type 1 versions
- **esieecv** – curriculum vitae (p. 49) for French
- **french** – style for French typography: light version
- **frenchle** – French option for **babel** (also independently)
- **french-translations** – French translation project for documentation of \LaTeX packages
- **frhyph** – French hyphenation patterns
- **lettre** – letters and faxes in French
- **brief** – German letter style
- **dinat** – bibliography style files intended for texts in German in accordance with the German DIN 1505, parts 2 and 3
- **dinbrief** – implements a document layout for writing letters according to the rules of DIN
- **fribrief** – a \LaTeX class for writing letters
- **g-brief** – serves to format formless letters in German or English language
- **german** – support for traditional German typography
- **germbib** – German variants of standard **BIB \TeX** styles
- **germdoc** – guide to **german**
- **ngerman** – supports the new German orthography, or »Neue deutsche Rechtschreibung«

- `cbgreek` – METAFONT source files for a complete set of Greek fonts; for typesetting ancient Greek using the `babel` package with the option `polutonikogreek`, see Humanities, (p. 58) for more references related to the Humanities
- `cyriot` – provides a METAFONT version of a syllabic script which was used on Cyprus for writing Greek between approximately the tenth and third centuries BC; part of the archaic fonts
- `greek4cbc` – a Greek monumental font as used on a stele in Athens in 394BC
- `greek6cbc` – this Greek font is typical of those used in the 6th century BC
- `hyphenation-greek` – hyphenation patterns for ancient and modern Greek
- `kdgreek` – greek fonts
- `lgreek` – macros for using Silvio Levy’s Greek fonts
- `macgreek` – greek language support for the macintosh
- `mtgreek` – use italic and upright greek letters with `mathtime`
- `upgreek` – provides the upright Greek letters from the Euler or Adobe Symbol fonts as additional math symbols, with proper scaling in super- and subscripts
- `ibycus` – Ibycus 4 system, a collection of fonts and macros to typeset ancient Greek; the bold Ibycus font is now available in PostScript format
- `gurmukhi` – Gurmukhi (a Punjabi language) for T_EX, including a converter from ASCII to Gurmukhi
- `arabtex` – macros and fonts for typesetting Arabic
- `cjhebrew` – typeset Hebrew with L^AT_EX containing two Type 1 fonts
- `makor` – a system for typesetting Hebrew with T_EX
- `Makor 2` – typeset Hebrew with vowels or liturgical accents, Yiddish, documents prepared using `arabtex` Hebrew conventions, *Biblia Hebraica Stuttgartensia*, and Old Hebrew with Omega
- `pcfonts` – support for Hebrew
- `icelandic` – Icelandic fonts
- `itrans` – the Indian Language Transliteration package
- `\verbinuit+` – a set of Lambda (Omega, p. 69) typesetting tools for the Inuktitut language
- `C.D.P. Bundle` – business letters in the Italian style
- `ithyph` – Italian hyphenation
- `hlatex` – support for Korean documents written in Korean standard KSC codes for L^AT_EX 2_ε, see also CJK at p. 44

- `uhc-gothic` – fonts for the Korean language
- `lahyph` – hyphenation patterns for typesetting Latin, part of the `babel` package
- `malayalam` – fonts for typesetting Malayalam, with a pre-processor
- `manju` – Manju language support
- `montex` – provides Mongolian support for $\LaTeX 2_{\epsilon}$ (now Cyrillic (p. 44), but soon also Classical Mongolian)
- `nohyphbx` – hyphenation patterns for Norwegian
- `cc-pl` – Polish extension of Computer Concrete fonts (METAFONT sources)
- `cc-plps` – Polish extension of Computer Concrete fonts in Type 1 format
- `gustlib` – various small utility packages for typesetting in plain \TeX , with a Polish perspective
- `mex` – an adaptation of Plain \TeX and $\LaTeX 2.09$ formats to the Polish language and to the Polish printing customs
- `ogonek` – support for Polish typography and the ogonek
- `plfonts` – Polish extension to CM fonts
- `pthyphs` – hyphenation patterns for Portuguese
- `romaniantex` – a $\LaTeX 2_{\epsilon}$ package for typesetting Romanian in a multi-lingual \TeX environment
- `sanskrit` – a font and pre-processor suitable for the production of documents written in Sanskrit
- `sinhala` – support for the Sinhala language
- `sihyph23` – Slovene hyphenation patterns
- `osmanian` – Osmanian fonts by Alan Stanier for writing Somali
- `esindex` – typset index entries in Spanish documents
- `spanish` – various \TeX related files for typesetting documents written in Spanish, including hyphenation and dictionaries
- `sehyph` – hyphenation patterns for Swedish
- `swebib` – Swedish translation of standard
- `swetex` – plain \TeX support for writing Swedish
- `slatex` – \LaTeX support for writing Swedish
- `wntamil` – Tamil to \TeX converter
- `telugu` – plain \TeX and \LaTeX support for writing in Telugu
- `ctib4tex` – Tibetan for \TeX and $\LaTeX 2_{\epsilon}$; no external preprocessor is needed
- `ttt` – a Tibetan Transcript Transliterator for \LaTeX
- `turkish` – fonts and macros for Ottoman Turkish and Modern Turkish in Roman letter transcription

- `ukrhyph` – Ukrainian hyphenation patterns; a converter from cyrillic letters to ASCII is `ascii-cyrillic`, see also packages for Cyrillic encodings and fonts (p. 44)
- `tcvn` – a package for vietnamese TCVN encoding which is widely used in MS-Windows
- `vncmr` – a Vietnamese extension of the `cmr` fonts
- `vntex` – Vietnamese \LaTeX and plain \TeX support

»Office« applications

Writing letters, faxes, memos, and newsletters

The KOMA-Script bundle provides a letter class of its own called `scr1ttr2`.

- `akletter` – extends \LaTeX 's usual letter class, providing support for building your own letterhead and marking fold points for window envelopes
- `brief` – German private letter class
- `C.D.P. Bundle` – business letters in the Italian style
- `dinbrief` – German letter class implementing a document layout for writing letters according to the rules of DIN
- `envlab` – package for producing mailing envelopes and labels, including barcodes, and address formatting according to the US Postal Service rules
- `facsimile` – provides a simple interface for creating a fax with \LaTeX
- `fax` – document class for preparing faxes
- `fribrief` – a \LaTeX class for writing letters
- `formlett` – letters to multiple recipients
- `g-brief` – formless letters in German or English
- `lettre` – letters and faxes in French
- `myletter` – another letter package
- `newlrm` – integrates the letter class with `fancyhdr` and `geometry` to automatically make letterhead stationery (useful for writing letters, fax, and memos)
- `newsletr` – macros to help create newsletters and newspapers
- `postcards` – facilitates mass mailing of postcards (junkmail, US standard size)

Keeping lists of addresses and mass mailing

The KOMA-Script bundle provides `scraddr` that goes with the `scr1ttr2` letter class for using address data in letters.

- `adrlist` – using address lists in L^AT_EX
- `csvtools` – allows you to repeatedly perform a set of L^AT_EX commands on data in each row of a comma separated variable (CSV) file
- `delimtxt` – read and parse text tables; can be used for serial letters and the like, making it easier to export data files from MS-Excel/MS-Word
- `directory` – a package for L^AT_EX and B_IB_TE_X that facilitates the construction, maintenance, and exploitation of an address list
- `formlett` – letters to multiple recipients
- `mailing` – macros for mail merging
- `postcards` – facilitates mass mailing of postcards (junkmail, US standard size)
- `textmerg` – merge text in T_EX and L^AT_EX (useful in mail merge)

Calendars, date, and time

- `advdate` – provides macros which can add a specified number of days to the current date (as specified in `\today`) and print it; intended for use, for example, in invoices payable within 14 days from today etc
- `calendar` – organizes date items in a format suitable for conference schedules, itineraries, academic teaching timetables, and the like
- `china2e` – a L^AT_EX package to produce Chinese calendar symbols of the old Chinese lunisolar calendar
- `clock` – graphical and textual clocks for T_EX and L^AT_EX
- `kalendar` – a calendar style
- `kalender` – style file for creating a calendar (in German)
- `plcalendar` – plain macros for making nice calendars
- `termcal` – print a term calendar for use in planning a class
- `timesht` – package for typesetting time sheets

Money Currency

There are some packages for making the Euro currency symbol (€) (p. 37) work in L^AT_EX.

Writing Applications for a job, cv

There are no packages for writing an application as a whole. So try to combine one of the following packages for CV's with a package for letters (p. 48) that suits your needs.

- `CurVe` – a L^AT_EX 2_ε class for writing a curriculum vitae
- `currvita` – package for typesetting a curriculum vitae
- `cv` – a package for creating a curriculum vitae
- `esieecv` – curriculum vitae for French
- `europecv` – an unofficial L^AT_EX implementation of the standard model for curricula vitae as recommended by the European Commission that is flexible enough to be used for any kind of curriculum vitae
- `vita` – this class provides necessary macros to prepare your curriculum vitae or resume

Business cards, labels, and envelopes

- `bizcard` – typeset business cards
- `envbig` – printing addresses on envelopes
- `envlab` – addressing of envelopes and creation of mailing labels, including barcodes and address formatting according to the US Postal Service rules
- `flabels` – pretty labels (optionally colored) for the back of files or binders

Leaflets

- `booklet` – aids for printing simple booklets
- `faltblat` – a package for making leaflets (two sides at three columns each)
- `leaflet` – create small hand-outs that fit on a single sheet of paper which is then folded twice

Writing invoices

- `advdate` – provides macros which can add a specified number of days to the current date (as specified in `\today`) and print it; intended for use, for example, in invoices payable within 14 days from today etc
- `dcolumn` – align on the decimal point of numbers in tabulars
- `invoice` – generate invoices

Presentation slides

Michael Wiedmann provides a comprehensive overview (<http://www.miwie.org/presentations/>) of tools for making screen presentations, most of them working with L^AT_EX.

- **beamer** – a \LaTeX class for producing presentations and slides
- **foihhtml** – provides integration between **foiltex** and **latex2html**
- **foiltex** – a $\LaTeX 2_{\epsilon}$ class for overhead transparencies that can be used with **fancybox** to place a variety of borders around the slides
- **ha-prosper** – patches and improvements for the **prosper** package
- **ifmslide** – produce printed slides with \LaTeX and online presentations with **pdf \LaTeX** compatible with **seminar**
- **pdfscreen** – an extension of the **hyperref** package to provide a screen based document design
- **pdfslide** – presentation slides using **pdf \TeX** , helping to mix mathematical formulae with text and graphics which the present day WYSIWYG tools fail to accomplish
- **prosper** – a \LaTeX class for writing transparencies, written on top of the **seminar** class; **ha-prosper** supplies some patches and improvements
- **seminar** – produce overhead slides (transparencies) with bells and whistles
- **slidenotes** – a class package for the easy production of a slide collection with annotations
- **slides** – a standard $\LaTeX 2_{\epsilon}$ class for the production of overhead transparencies (foils), replacing the older **SL \TeX** format

Spreadsheets

There is **Calc2 \LaTeX** (<http://web.hc.keio.ac.jp/~mr041754/calc2latex/>) for converting OpenOffice spreadsheets to \LaTeX tables.

- **csvtools** – allows to repeatedly perform a set of \LaTeX commands on data in each row of a comma separated variable (CSV) file
- **Excel-to-LaTeX** – convert Excel spreadsheets to \LaTeX tables (works with Excel up to Excel 97)
- **xl2latex** – convert Excel (97 and above) tables to \LaTeX tabulars

Databases

- **LaTeXDB** – integrates \LaTeX and SQL databases
- **SQLTeX** – a well documented Perl script that serves as a preprocessor to enable the use of SQL statements in \LaTeX

Science

There are some more packages for working on your bibliography (p. 30). Packages specific to one subject are listed both there and below.

Typesetting theses and scientific publications

There are more alternative document classes (p. 21) which you may use for scientific work as well.

- `adfathesis` – Australian Defence Force Academy thesis format
- `afthesis` – L^AT_EX thesis and dissertation class for US Air Force Institute Of Technology
- `amsart` – a L^AT_EX document class for articles that is tailored to the design of American Mathematical Society journals
- `amsbook` – a L^AT_EX document class for books that is tailored to the design of American Mathematical Society publications
- `amsproc` – a L^AT_EX document class for conference proceedings that is tailored to the design of American Mathematical Society publications
- `ebsthesis` – facilitates the production of camera-ready manuscripts in conformance with the guidelines of Gabler Verlag and typographical rules established by European Business School
- `elsevier` – preprint style for Elsevier Science journals
- `nrc` – macros and some documentation, for typesetting papers for submission to journals published by the National Research Council of Canada
- `paper` – a class derived from article, tuned for producing papers for journals introducing new layout options, and new commands
- `pitthesis` – document class for University of Pittsburgh theses
- `startex` – a T_EX format designed to help students write short reports and essays
- `thesis` – a class for producing a thesis based on the report class for a more European and more flexible look
- `uaclasses` – typesetting theses and dissertations in the official format required by the University of Arizona
- `utorontothesis` – a L^AT_EX 2_ε thesis class definition for University of Toronto
- `ut-thesis` – University of Toronto thesis style
- `uwthesis` – University of Washington thesis style

Typesetting laboratory journals

- **labbook** – typeset laboratory journals that contain chronologically ordered records about experiments based on KOMA-Script

Mathematics

For typesetting arrays see also the packages for tables (p. 27) and for formatting decimal columns (p. 27). There are some guides (p. 16) on using L^AT_EX for Mathematics.

Calculating

- **advdate** – provides macros which can add a specified number of days to the current date (as specified in `\today`) and print it; intended for use, for example, in invoices payable within 14 days from today etc
- **calc** – adds infix expressions to perform arithmetic in certain L^AT_EX commands
- **fltpoint** – the package provides simple floating point operations
- **fp** – provides an extensive collection of arithmetic operations for fixed point real numbers of high precision
- **realcalc** – macros for real arithmetic calculations

 $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX

- **amsart** – a L^AT_EX document class for articles that is tailored to the design of American Mathematical Society journals
- **amsbook** – a L^AT_EX document class for books that is tailored to the design of American Mathematical Society publications
- **amslatex** – a collection of loosely related files that are distributed together by the American Mathematical Society, these files are miscellaneous enhancements to L^AT_EX whose aim is superior information structure of mathematical documents and superior printed output
- **amscd** – part of the $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX distribution, this package adapts the commutative diagram macros of $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX for use in L^AT_EX
indexKommutative Diagramme
- **amsmath** – the principal package in the $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX distribution
- **amsproc** – a L^AT_EX document class for conference proceedings that is tailored to the design of American Mathematical Society publications

- `amstext` – defines a `\text` macro, which makes it easy to incorporate fragments of text inside a displayed equation or a sub- or superscript
- `amsthm` – a \LaTeX package that facilitates the kind of theorem setup typically needed in American Mathematical Society publications environments and to tag the equations therein

Support for $\mathcal{A}\mathcal{M}\mathcal{S}$ - \LaTeX

- `empheq` – provides a visual markup extension to `amsmath`
- `onlyamsmath` – inhibits the usage of plain \TeX and on demand of standard \LaTeX math environments which is useful for class writers who want to force their clients to use the environments provided by the `amsmath` package
- `tex2ltx` – useful for converting plain \TeX files into $\mathcal{A}\mathcal{M}\mathcal{S}$ - \LaTeX and convert plain $\mathcal{A}\mathcal{M}\mathcal{S}$ - \TeX bibliographic references into `BibTeX`

The easy family of packages

- `easy` – a collection of »easy« to use macros
- `easybmat` – a simple package for writing block matrices with equal column widths or equal row heights or both, with various kinds of rules between rows and columns
- `easyeqn` – a simple package for writing equations
- `easymat` – a simple package for writing matrices
- `easytable` – a simple package for writing tables
- `easyvector` – write vectors in a C-like fashion

Other math macros

- `mhequ` – simplifies the creation of multi-column equation
- `nath` – a \LaTeX style to separate presentation and content in mathematical typography
- `vector` – macros for more convenient representation of vectors in $\text{\LaTeX} 2_{\epsilon}$, both symbolically and as implicit or explicit rows/columns of elements
- `maybemath` – the `\maybebm` and `\maybeit` macros can be used in math expressions to make the arguments typeset as bold, or italic, respectively if the surrounding context is appropriate; they are useful for writing user macros for use in general contexts

Math fonts

PostScript (p. 63) math fonts are supported by both the `mathpazo` package for Palatino and the `mathptmx` package for Times which are part of the `psnfss` package. See the `psnfss` (p. 39) section for details.

- `aoposter` – provides fonts in sizes of 12 pt up to 107 pt, and also makes sure that in math formulas the symbols appear in the right size
- `amsfonts` – augments the standard set normally distributed with T_EX, including: extra mathematical symbols; blackboard bold letters (uppercase only)
- `concmath` – Concrete Math fonts fraktur (p. 38) letters; subscript sizes of bold math italic and bold Greek letters; subscript sizes of large symbols such as sum and product; added sizes of the Computer Modern (p. 33) small caps font; cyrillic (p. 44) fonts (from the University of Washington); Euler math fonts
- `euler` – provides a setup for using the \mathcal{AMS} Euler family of fonts for math in L^AT_EX documents
- `eulervm` – Euler virtual math fonts based on Euler and CM, compatible with `amsmath`
- `upgreek` – a package to provide the upright Greek letters from the Euler or Adobe Symbol fonts as additional math symbols, with proper scaling in super- and subscripts

Math graphics

- `circle` – provides circles in math mode that can be used for the nextstep operator of temporal logic, in conjunction with `\Box` and `\Diamond` (`latexsym`) or `\square` and `\lozenge` (`amssymb`)
- `sseq` – provides a new L^AT_EX environment for inline typesetting of spectral sequence charts; it is built on top of `xypic`
- `venn` – creating Venn diagrams with `METAPOST`
- `xypic` – a package for typesetting a variety of graphs and diagrams with T_EX
- `pst-plot` – a PSTricks related package for typesetting a variety of 2D graphs and diagrams
- `pst-3dplot` – a PSTricks related package for typesetting a variety of 3D graphs and diagrams

Physics

- `isotope` – typesetting isotopes
- `nrc` – macros and some documentation, for typesetting papers for submission to journals published by the National Research Council of Canada
- `hepparticles` – macros for typesetting high energy physics particle names
- `revtex` – styles for various physics journals

Chemistry

- `chem-journal` – various $\text{BIB}\TeX$ formats for journals in Chemistry, including Reviews in Computational Chemistry, Journal of Physical Chemistry, Journal of Computational Chemistry, and Physical Chemistry Chemical Physics
- `chemarr` – analogous to `amsmath \xrightarrow` and `\xleftarrow` this package provides a macro for a longer version of reaction arrows with the possibility to put text above and below; it requires $\mathcal{A}\mathcal{M}\mathcal{S}\text{-}\mathcal{L}\text{A}\mathcal{T}\mathcal{E}\mathcal{X}$ (p. 53)
- `chemcon` – support for compound numbers in chemistry documents
- `chemsym` – $\text{Con}\TeX$ t macros for typing chemical symbols
- `mhchem` – typeset chemical formulae and equations as well as risk and safety phrases
- `ppctex` – a separate module of the `conTeXt` macro package for typesetting chemical formulae (available as `cont-ppc.zip`)
- `isotope` – typesetting isotopes

Biology

- `jtbnew` – $\text{BIB}\TeX$ style for Journal of Theoretical Biology
- `biocon` – $\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$ package for typesetting of biological species names
- `dichokey` – $\mathcal{L}\mathcal{A}\mathcal{T}\mathcal{E}\mathcal{X}$ package for dichotomous identification keys
- `texshade` – package for setting nucleotide and peptide alignments
- `textopo` – annotated membrane protein topology plots

Electronics

For drawing circuit diagrams (p. 62) see also the `PSTricks` (p. 40) packages.

- `circ` – macros for typesetting circuit diagrams
- `circuit-macros` – M4 macros for electric circuit diagrams

- **timing** – fonts and macro package for drawing timing diagrams
- **MP Examples** – example pictures drawn with metapost
- **metapost** – a tool based on METAFONT for producing precise technical illustrations, creating scalable PostScript instead of bitmaps
- **refman** – a document class for writing technical reference manuals offering a wide left margin for notes to the reader, like some of the manuals distributed by Adobe, available for articles and reports

Computer science

- **alg** – typesetting algorithms; lines are automatically numbered and can be referenced, with easy indentation and algorithms as floats
- **algorithm2e** – an environment for writing algorithms, defining an algorithm as a floating object
- **algorithmic** – provides an environment for describing algorithms
- **algorithms** – defines a floating algorithm environment designed to work with the algorithmic package
- **pseudocode** – a L^AT_EX environment for specifying algorithms in a natural way
- **c-pascal** – a T_EX macro package for easy typesetting of programs in C and Pascal
- **docmfp** – extends the **doc** package to cater for documenting non-L^AT_EXcode, such as METAFONT or METAPOST, or other programming languages
- **listing** – produce formatted program listings
- **listings** – typeset programming code within L^AT_EX using different styles, e.g., default is bold for keywords, italic for comments and no special style for strings, including support for hyperref
- **method** – typesetting of programming language method and variable declarations; includes an option to typeset in French
- **program** – typesetting programs and algorithms
- **semantic** – typesetting of notation of semantics and compilers; includes T-diagrams, various derivation symbols and inference trees
- **texlist** – typeset program (or ASCII text file) listings; a C program that generates L^AT_EX 2_ε

Humanities

For typesetting ancient Greek (p. 45) use the `babel` package with the option `polutonikogreek`. For typesetting Latin you may use the `babel` package with the option `latin`. There are packages for typesetting poetry and drama (p. 65).

Bibliography

See also the general section on bibliographies (p. 30).

- `bibarts` – a package to assist in making bibliographical lists common in the arts
- `jurabib` – BIB_TE_X databases mainly for German legal texts, but also of interest to everyone working in the humanities
- `oxford` – a BIB_TE_X style implementing the Oxford style, based on Harvard

Critical editions

There are some packages for working on footnotes and endnotes (p. 24) as well as for numbering lines and paragraphs (p. 27), and multilingual support (p. 43). A summary of the `edmac` package in comparison to endnotes and `ledmac` as well as links to additional software helping in writing critical editions can be found on Dominik Wujastik's homepage (<http://www.homepages.ucl.ac.uk/~ucgadkw/edmac/index.html>).

- `bigfoot` – for critical edition typesetting, used for solving every problem around footnotes
- `edmac` – a macro package for typesetting scholarly critical editions
- `ednotes` – typesetting scholarly critical editions with L^AT_EX
- `ledmac` – typesetting scholarly critical editions; a L^AT_EX port of the plain T_EX `edmac` macros
- `parallel` – typesetting two languages side-by-side
- `parrun` – typesetting two streams of text running parallel one above the other
- `poemscol` – a set of L^AT_EX macros for typesetting critical editions of poetry

Typesetting dictionaries

- `lexikon` – implements commands to generate a two language dictionary

Misc

- **alnumsec** – alphanumeric section numbering similar to **alphanum**, but you may use the standard L^AT_EX sectioning commands
- **alphanum** – permits alphanumeric section numbering
- **teubner** – philological typesetting

Psychology

- **apa** – a L^AT_EX class to format text according to the American Psychological Association Publication Manual (4th ed.) specifications for manuscripts or to the APA journal look
- **apacite** – a B_IB_TE_Xstyle which closely follows the APA style citation, claiming to provide the closest match
- **apasoft** – a more conforming apa-like style for B_IB_TE_X
- **mslapa** – L^AT_EX and B_IB_TE_X style files for a respectably close approximation to APA citation and reference style

Law

- **advdate** – provides macros which can add a specified number of days to the current date (as specified in `\today`) and print it
- **alnumsec** – alphanumeric section numbering similar to **alphanum**, but you may use the standard L^AT_EX sectioning commands
- **alphanum** – permits alphanumeric section numbering as part of the **jura** package
- **jura** – implements the standard layout for German term papers in law
- **jurabib** – B_IB_TE_X databases mainly for German legal texts, but also of interest to everyone working in the humanities
- **juramisc** – a package for writing court sentences, legal opinions, and dissertations, so far for German lawyers only
- **juraabbrev** – handle abbreviations for typesetting (German) juridical documents
- **jurarsp** – a B_IB_TE_X style for quoting court decisions and official papers as required in German legal texts
- **lertext** – L^AT_EX is a collection of macros intended to enable lawyers, and in particular barristers, to format their work using plain T_EX

Economics

- **ebsthesis** – facilitates the production of camera-ready manuscripts in conformance with the guidelines of Gabler Verlag and typographical rules established by European Business School

Phonetics

- **ipa** – using the WSU International Phonetic Alphabet
- **phonetic** – METAFONT phonetic fonts, based on Computer Modern
- **tipa** – fonts and macros for IPA phonetics characters
- **wsuipa** – style for using international phonetic alphabet fonts
- **wsuipa2tipa** – a filter that translates an old L^AT_EX document, replacing all **wsuipa** font commands with **tipa** font commands

Including graphics

See also the packages for including floats (p. 29) and for adding colour and shading (p. 64). We also list guides (p. 16) on including graphics.

- **epsfig** – including Encapsulated PostScript in L^AT_EX documents, now superseded by the L^AT_EX 2_ε graphics package
- **graphics** – the primary L^AT_EX package for the support of the inclusion of graphics generally produced with other tools
- **graphicx** – better support for graphics, builds upon the **graphics** package
- **grfguide** – guide to using graphics in L^AT_EX, including documentation on various packages including **color** and **graphicx**
- **MiniPlot** – a package for easy figure arrangement
- **picinpar** – insert pictures into paragraphs
- **picins** – insert pictures into paragraphs (appears to be better than **picinpar**)
- **photo** – a float environment for including photographs
- **rotating** – a package built on the standard L^AT_EX **graphics** package to perform all the different sorts of rotation one might like
- **wallpaper** – easy addition of wallpapers (background images) to L^AT_EX documents, including tiling

Drawing graph paper and grids

- `graphpap` – basic package for producing graph paper
- `typogrid` – produces a typographic grid on every page of the document, useful to get the horizontal measures (distances etc)

Drawing diagrams and charts

Arrow theoretic diagrams

- `arrow` – explain macros for arrow theoretic diagrams
- `barr` – diagram macros by Michael Barr
- `diagxy` – draw commutative diagrams

Barcharts

- `bar` – provides the `barenv` environment for bar charts
- `bardiag` – L^AT_EX package for drawing bar charts

Bridge diagrams

- `bridge` – macros for typesetting bridge diagrams

Drawing circles

- `circle` – provides circles in math mode that can be used for the nextstep operator of temporal logic, in conjunction with `\Box` and `\Diamond` (`latexsym`) or `\square` and `\lozenge` (`amssymb`)

Clocks

- `clock` – graphical and textual clocks for T_EX and L^AT_EX

Commutative diagrams

- `amscd` – part of the $\mathcal{A}\mathcal{M}\mathcal{S}$ -L^AT_EX distribution, this package adapts the commutative diagram macros of $\mathcal{A}\mathcal{M}\mathcal{S}$ -T_EX for use in L^AT_EX
- `DCpic` – a package for typesetting commutative diagrams within L^AT_EX and T_EX documents
- `taylor` – diagram macros by Paul Taylor

Computer keyboards

- `keystroke` – a L^AT_EX package which provides macros for the graphical representation of the keys on a computer keyboard

Electric circuit diagrams

See also the electronics (p. 56) section and the PSTricks (p. 40) package.

- `circ` – macros for typesetting circuit diagrams
- `circuit-macros` – a set of macros for drawing high quality electric circuits containing fundamental elements, amplifiers, transistors, and basic logic gates to include in T_EX, L^AT_EX, or similar documents

Feynman diagrams

- `feyn` – a METAFONT font for Feynman diagrams
- `feynmf` – macros and fonts for creating Feynman and other diagrams

Karnaugh maps and Veitch charts

- `karnaugh` – macros intended for typesetting Karnaugh maps and Veitch charts in a simple and user-friendly way

Logic diagrams

- `logic` – a METAFONT font for drawing logic diagrams
- `pst-circ` – a PSTricks related package for drawing logical elements

Nassi-Schneidermann diagrams

- `nassflow` – drawing Nassi-Schneidermann diagrams
- `struktex` – creating Nassi-Shneiderman structure charts

P_ICT_EX

- `pictex` – picture drawing macros for T_EX and L^AT_EX
- `pictex2` – adds relative coordinates and rules for dots in plots to standard P_ICT_EX

PostScript macros for drawing

- **pstricks** – PostScript macros for color, graphics, pie charts, rotation, trees, and overlays, supplying many special features like 3-dimensional graphics and so on

Syntax diagrams

- **rail** – a C program and L^AT_EX package to draw syntax diagrams specified in EBNF
- **semantic** – eases the typesetting of notation of semantics and compilers; includes T-diagrams, various derivation symbols, and inference trees
- **syngen** – a tool for generating syntax diagrams from BNF
- **syntax-mdw** – typeset syntax descriptions
- **syntax2** – creation of syntax diagrams

Timing diagrams

- **timing** – fonts and macro package for drawing timing diagrams

Vector arrows

- **esvect** – write vectors using an arrow which is different to the Computer Modern one

Tools

- **Array Maker** – a program for making L^AT_EX and xypic arrays
- **gnuplot** – general purpose plotting program for generating almost any type of chart you wish and save it in L^AT_EX format or as EPS (or in any of a dozen other formats)
- **gnuplot-ps** – a package to facilitate the use of gnuplot pslatex output in L^AT_EX

Misc

- **borceux** – diagram macros by Francois Borceux

- **expressg** – a METAPOST package providing facilities to assist in drawing diagrams that consist of boxes, lines and annotations (particular support is provided for creating EXPRESS-G diagrams)
- **kuvio** – drawing macros and fonts for diagrams
- **m-pictex** – solves the ‘out of dimen’ problem that sometimes occurs when using P_lC_TE_X (especially together with L^AT_EX)
- **mdwtools** – miscellaneous tools by Mark Wooding
- **pb-diagram** – a diagram package using L^AM_S-T_EX or Xy-pic fonts
- **xypic** – a package for typesetting a variety of graphs and diagrams with T_EX

Adding some colour and shading

There are more packages for adding some colour to tables (p. 28).

- **backgrnd** – mark text with grey background or change bar in plain T_EX
- **changebar** – generate change bars in L^AT_EX documents
- **color** – allows text and page background colors to be set
- **colorsep** – support for colour separation when using dvips
- **contour** – generates a colored contour around a given text in order to enable printing text over a background without the need of a color box around the text
- **pstricks** – PostScript macros for color, graphics, pie charts, rotation, trees, and overlays, supplying many special features
- **shadethm** – package to produce shaded boxes, requiring the **color** package
- **shading** – putting text on a shaded background, requires a PostScript printer and DVI file converter
- **shadow** – shadows
- **xcolor** – provides easy driver independent access to several kinds of color tints, shades, tones, and mixtures of arbitrary colors; allows to select a document-wide target color model and offers complete tools for conversion between eight color models

Typesetting exam scripts and quizzes

- **answers** – styles for setting questions (or exercises) and answers
- **exam** – package for typesetting exam scripts
- **examdesign** – L^AT_EX class for typesetting exams

- **exams** – exam questions can be multiple choice or free form long/short answer questions; options include the typesetting of the exam itself, an exam showing all the answers and a collection of questions and answers; questions can be parameterized; use of a random generator provides for automatic shuffling of multiple choice items
- **exerquiz** – environments for defining exercises and quizzes, the quizzes are graded and optionally corrected by JavaScript

Music

- **abc2mtex** – notate tunes stored in an ASCII format (abc notation)
- **musicref** – reference page for Music \TeX
- **musictex** – typesetting music with \TeX
- **musixtex** – extended Music \TeX , with better slurs
- **songbook** – package for typesetting song lyrics

Poetry and drama

There are some more packages for those interested in the Humanities (p. 58), including work on critical editions (p. 58).

- **dialogue** – quote short scripted dialogue in \LaTeX
- **drama** – macros for typesetting a basic production-style stage script
- **dramatist** – a package for typesetting drama both in verse and in prose
- **edmac** – typesetting scholarly critical editions
- **ledmac** – a macro package for typesetting scholarly critical editions
- **play** – typesetting of plays, including options for line numbering
- **poemscol** – a set of \LaTeX macros for typesetting critical editions of poetry
- **plari** – a document class for typesetting stageplay scripts
- **verse** – aids for typesetting simple verse
- **xmlplay** – an `xmltex` package for typesetting the plays of Shakespeare, as marked up by Jon Bosak

Cooking recipes

- **cooking** – typeset recipes
- **recipe** – typeset recipes

Documenting games

- `backgammon` – typesetting backgammon boards
- `bakoma-games` – includes popular macro packages described in chapters 7 (Preparing music scores: M_usiX_T_EX) and 8 (Playing games: Chess, Xiangqi – Chinese Chess, Go, Backgammon, Bridge, Crosswords) of the »L_AT_EX Graphics Companion«
- `cheq` – Adobe chess font
- `cchess` – typesetting Chinese chess board diagrams
- `chess` – fonts for typesetting chess boards
- `go` – fonts and macros for typesetting go games
- `igo` – fonts and macro to typeset go diagrams
- `othello` – create othello boards in L_AT_EX
- `skak` – typeset chess games using PGN and show diagrams of the current board in the document

Crossword puzzles

- `crosswrđ` – Brian Hamilton Kelly’s `crosswrđ` package updated to run with L_AT_EX 2_ε
- `cwpuzzle` – typeset crossword puzzles

CD and MC covers

- `cdcover` – typeset CD covers
- `cdlabeler` – take user text and typeset it to fit a CD label
- `mceinleger` – creating MC covers on your own, requiring the `rotating` package

Support for the blind

- `braille` – support for braille

Using different character sets

- `inputenc` – control input encoding

Developing and documenting L^AT_EX packages

- **doc** – contains the definitions that are necessary to format the documentation of package files (Literate L^AT_EX) which incorporate both the documentation and the code
- **docstrip** – makes a package documentation file smaller by removing comments and other sections of the document conditionally
- **dtxtut** – tutorial on writing `.dtx` and `.ins` files
- **frankenbundle** – develop and distribute groups of L^AT_EX packages, classes and BibT_EX bibstyles
- **moredefs** – L^AT_EX defining, expansion and debugging commands

(L^A)T_EX distributions

texlive provides teT_EX for Unices (including Mac OS X) and **fp_{te}x** for Windows.

- **base** – definitive source of plain T_EX on CTAN
- **latex** – L^AT_EX is a (and probably the most) popular macro package for T_EX
- **latex209** – the pre-1993 L^AT_EX, no longer supported

Unices

- **dante-src** – contains the source code for a T_EX installation under UNIX
- **tetex** – a comprehensive distribution of TeX, L^AT_EX and family, particularly designed for easy installation on *ix platforms, included in **texlive**
- **VTeX/Free** – T_EX system and PDF support for Linux and OS/2
- **web2c** – the »standard« source C version of the T_EX system

DOS

- **emt_{te}x** – a T_EX system for MS-DOS

OS/2

- **emt_{te}x-os2** – a T_EX system for OS/2
- **VTeX/Free** – T_EX system and PDF support for Linux and OS/2

Windows

- **bakoma** – a comprehensive T_EX system for MS-Windows for preparing documents
- **bakoma-fonts** – Computer Modern and $\mathcal{A}\mathcal{M}\mathcal{S}$ fonts in PostScript Type 1 form
- **bakoma-games** – BaKoMa modules for music and games
- **emtexgi** – a MS-Windows interface to emT_EX
- **fptex** – a distribution of T_EX for MS-Windows based on **web2c** and teT_EX using InstallShield for installation, included in **texlive**
- **miktex** – a distribution of T_EX and friends for MS-Windows95 and MS-Windows-NT, features include easy installation and configuration and full T_EX and L^AT_EX support
- **miktex-axp** – a port of MiK_TE_X to MS-Windows-NT on the Alpha

Macintosh

Gary L. Gray and Joseph C. Slater have compiled a comprehensive site (<http://www.esm.psu.edu/mac-tex/>) for the Macintosh T_EX community.

- **cmactex** – this port of T_EX for the Macintosh includes Omega (p, 69) and pdfT_EX
- **macbibtex** – a port of BibT_EX which is distributed with OzT_EX for the Macintosh OS
- **oztex** – T_EX for the Macintosh
- **oztex-german** – German version of OzT_EX
- **tetex** – a comprehensive distribution of T_EX, L^AT_EX, and family, particularly designed for easy installation on *ix platforms, included in **texlive**

Misc

- **amiweb2c** – an Amiga port of the complete UNIX-T_EX system

ConT_EXt

ConT_EXt is another macro package for using T_EX, thus supplying an alternative to L^AT_EX. The ConT_EXt project <http://www.pragma-ade.com/> has a rather lively mailing list <http://www.ntg.nl/mailman/listinfo/ntg-context>. For those speaking German there is a comprehensive paper

<http://www.uni-giessen.de/partosch/TeX/ConTeXt-LaTeX/> by Günter Partosch summarising his talk on ConT_EXt vs. L^AT_EX held at a DANTE meeting in 2003.

- **context** – a full featured, parameter driven macro package, which fully supports advanced interactive documents

Omega

- **omega** – still experimental software, Omega is intended for multilingual typesetting, it uses Unicode and has additional primitives for (among other things) bidirectional typesetting
- **omegabase** – basic support files for Omega
- **omegafonts** – Omega fonts

Editors

See also L^YX (p. 70), <http://www.lyx.org>.

- **auctex** – provides an excellent environment for T_EX/L^AT_EX document production
- **LaTable** – a near-WYSIWYG editor for L^AT_EX tables
- **l_{at}ed** – a graphical editor for drawings in the L^AT_EX »picture« environment running under MS-DOS and MS-Windows
- **meta-mode** – a GNU Emacs Lisp package that implements a major mode for editing METAFONT or METAPOST sources
- **MPEdit** – METAPOST text editor for Win32
- **ntemacs** – a distribution of Emacs for MS-Windows32 machines
- **texed** – a T_EX shell for OS/2, FSS-T_EXEdit provides an easy interface for L^AT_EX 2_ε, dvips, GhostScript and spell
- **texniccenter** – an integrated development environment (IDE) for developing L^AT_EX documents on Windows
- **texshell32** – a free T_EXShell for MS-Windows
- **winedt** – a full-featured text editor and shell for MS-Windows allowing the editing of large, multiple, text files in the usual MS-Windows way
- **winshell** – a MS-Windows32 user interface for T_EX

LyX

- **LyX** – is not an editor (p. 69), but a frontend to L^AT_EX available for Unix-like (<http://www.lyx.org/download/>) platforms as well as MS Windows (<http://www.home.zonnet.nl/rareitsma/lyx/>) and the Macintosh (http://www.18james.com/lyx_on_aqua.html), offering a »what-you-see-is-what-you-mean« approach to working with text, different to the »what-you-see-is-what-you-get« way common to word processors (p. 20)

Previewers and plugins

- **acroread** – a tool from Adobe for reading Adobe PDF (p. 40) files available for a variety of architectures
- **dviwin** – a screen and printer driver for DVI files under Windows 3.1 and Windows NT
- **ghostscript** – freely available Aladdin and GNU PostScript interpreters available for many platforms and also useful for conversion from PostScript to other formats and particularly for printing to non-PostScript printers
- **ghostview-mac** – ghostView for `cmactex` to preview PostScript documents
- **gsview** – a graphical interface for GhostScript under MS-Windows or OS/2
- **jDVI** – a DVI viewer and printer coded in Java
- **mdvi** – a previewer for DVI files
- **ps_view** – a PostScript preamble providing an interactive environment for fast previewing of PostScript documents with GhostScript
- **techexplorer** – Netscape plugin for viewing T_EX and L^AT_EX sources available for most platforms
- **windvi** – a port of `xdvi` to Windows for previewing DVI files
- **xdvi** – a DVI previewer for the X Window System
- **xpdf** – previewing and manipulating of PDF files on most platforms available

Spell checker

- **excalibur** – a spelling checker for the Macintosh that is also L^AT_EX aware
- **fourspell** – Windows32 spell checker for T_EX, RTF, HTML and BibT_EX the dictionaries of which are compatible with WinEdT

- `jspell` – an ASCII file spelling checker

Converters

\TeX and word processors

You may now input text using OpenOffice Writer (<http://www.openoffice.org>) and later convert it to \LaTeX with Java-based Writer2 \LaTeX (<http://www.hj-gym.dk/~hj/writer2latex/>).

If you are using $\text{L}_\text{Y}\text{X}$ (p. 70) there are two converters coming with $\text{L}_\text{Y}\text{X}$ for importing \LaTeX files: `reLyX` (a Perl script) and `tex2lyx`.

The TUG (<http://www.tug.org>) offers an overview of converters from PC textprocessors to \LaTeX (<http://www.tug.org/utilities/texconv/pctotex.html>) and vice versa from \LaTeX to PC (<http://www.tug.org/utilities/texconv/textopc.html>).

- `catdoc` – converts binary MS-Word files into ASCII text, optionally with some \TeX control sequences
- `latex2rtf` – convert \LaTeX into Rich Text Format
- `tex2rtf` – convert \TeX into Rich Text Format
- `word2x` – a word6 to anything converter, currently supporting output formats in text and \LaTeX

\TeX to HTML

- `latex2html` – a Perl (p. 73) program that translates \LaTeX into HTML
- `ltoh` – a converter from \LaTeX to HTML
- `tex4ht` – a converter from \TeX and \LaTeX to hypertext (HTML, XML (p. 73), etc), providing a configurable (\LaTeX)-based authoring system for hypertext
- `tth` – a \TeX to HTML translator
- `typehtml` – typeset HTML directly from \LaTeX that can handle almost all of HTML2 and most of the math fragment of the draft HTML3

HTML to \TeX

- `hyperlatex` – a package that allows you to prepare documents in HTML and to produce a neatly printed document from your input using \LaTeX ; it is **not** a \LaTeX to html converter

Font formats

- `fontinst` – T_EX macros for converting Adobe Font Metric files to T_EX metric and virtual font format
- `mf2pt1` – produce PostScript Type 1 fonts from METAFONT (p. 36) source
- `mf2pt3` – Perl (p. 73) script to generate PostScript Type 3 fonts from METAFONT (p. 36) sources
- `ttf2mf` – MS program to convert TrueType to METAFONT (p. 36)
- `ttf2pk` – this tool rasterizes the glyph outlines of a TrueType font into a bitmap font in PK format as part of the FreeType package
- `ttf2pt1` – a tool that converts TrueType fonts into PS Type 1 fonts (p. 35)
- `ttf2tex` – a bash script which will create all files necessary to use TrueType fonts with t_EX from a set of TTF files
- `ttf2tfm` – extracts the metric and kerning information of a TrueType font and converts it into metric files usable by T_EX (quite similar to `afm2tfm` which is part of the `dvips` package)
- `ttftogf` – convert MS-Windows TrueType fonts to GF format

Misc

There is Calc2L^AT_EX (<http://web.hc.keio.ac.jp/~mr041754/calc2latex/>) for converting OpenOffice spreadsheets to L^AT_EX tables.

- `bmeps` – converter from PNG/JPEG/TIFF/NetPBM to EPS
- `catdvi` – a DVI to plain text translator capable of generating ASCII, Latin-1, and UTF-8 (Unicode) output
- `csvtools` – allows you to repeatedly perform a set of L^AT_EX commands on data in each row of a comma separated variable (CSV) file
- `dvi2tty` – a DVI driver to produce an ASCII representation of the document
- `delimtxt` – read and parse text tables
- `Excel-to-LaTeX` – convert Excel spreadsheets to L^AT_EX tables (works with Excel up to Excel 97)
- `mif2xfig` – a tool to convert diagrams from Framemaker’s MIF format to XFig’s format and vice versa
- `psrip` – extracts images from PostScript files
- `pstoedit` – translate PostScript and PDF to other formats

- `pstotext` – extract ASCII from PostScript and PDF which uses GhostScript, but does a more careful job with kerned characters and nonstandard font encodings than GhostScript's `ps2ascii` utility
- `txt2latex` – a small Perl (p. 73) script intended to facilitate batch conversion of largely unformatted ASCII text for use with L^AT_EX
- `txt2tex` – converts plain text into something with a little L^AT_EX formatting
- `xl2latex` – convert Excel (97 and above) tables to L^AT_EX tabulars

Using Perl with L^AT_EX

- `perltext` – define L^AT_EX macros in terms of Perl code (<http://www.cpan.org>)

Using XML with L^AT_EX

- `jadetex` – macro package on top of L^AT_EX to typeset T_EX output of Jade DSSSL implementation
- `xmlplay` – an `xmltex` package for typesetting the plays of Shakespeare, as marked up by Jon Bosak
- `xmltex` – support for parsing XML documents

Some more binaries

- `bzip2` – compression program

Miscellaneous packages

- `eplain` – simple but powerful extended version of the plain format, adding support for bibliographies, tables of contents, enumerated lists, verbatim input of files, numbered equations, tables, two-column output, footnotes, and commutative diagrams (p. 61)
- `extract` – provides the means to extract specific content from a source document and write that to a target document, e.g. all exercises from lecture notes and generating an exercises book on the fly

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Erratum zu: Naturwissenschaftliche Publikationen mit \LaTeX

Iris Hinneburg

- Markus Kohm hat mich freundlicherweise auf einen Fehler in meinem Beitrag im letzten Heft 4/2004, S.31–37, hingewiesen: Natürlich ist die Option `titlepage` bei `scartcl` (genauso wie bei `article`) definiert, sie ist nur nicht die Default-Einstellung. Damit entfällt die Notwendigkeit, nach `maketitle` manuell einen Seitenumbruch durchzuführen.
- In der Kombination mit dem Paket `setspace` beeinflusst der Befehl `\AtBeginDelayedFloats{\setstretch{1.66}}` nur den Zeilenabstand im Abbildungs- bzw. Tabellenverzeichnis, nicht jedoch in der eigentlichen Abbildungsunter- bzw. Tabellenüberschrift (weil `setspace` explizit den Zeilenabstand in Gleitobjekten auf einzeilig setzt). Dies lässt sich allerdings mit dem Befehl `\addtokomafont{caption}{\doublespacing}` in der Präambel erreichen.
- Im Abschnitt »Literaturverzeichnis« muss es auf Seite 36, zweiter Absatz heißen: »Lösen lässt sich dieses Dilemma dadurch, dass im `BIBTEX`-Eintrag bei »*journal*« ein selbstdefinierter String eingetragen wird [...]«.

T_EX-Beiprogramm

Edition dante

Markus Kohm und Jens-Uwe Morawski:

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Herbert Voß:

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- 30. 4.–3. 5. 2005** The 13th GUST Conference and Annual Meeting
Bacho \TeX 2005
Bachotek (Brodnica Lake District), Polen
- 14.–17. 6. 2005** Practical \TeX 2005
Chapel Hill, North Carolina, USA

Stammtische

In verschiedenen Städten im Einzugsbereich von DANTE e.V. finden regelmäßig Treffen von T_EX-Anwendern statt, die für jeden offen sind. Im WWW gibt es aktuelle Informationen unter <http://www.dante.de/events/stammtische/>.

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Torsten Bronger
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Gaststätte Knossos
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Gasthaus Pali-Eck
Koppenstr. 41
Zweiter Donnerstag im Monat, 19.00 Uhr

Bremen

Martin Schröder
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Wechselnder Ort
Erster Donnerstag im Monat, 18.30 Uhr

Darmstadt

Karlheinz Geyer
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Restaurant Poseidon
Rheinstraße 41
64283 Darmstadt
Erster Freitag im Monat, ab 19.30 Uhr

Dresden

Carsten Vogel
lego@wh10.tu-dresden.de
Studentenwohnheim, Borsbergstraße 34,
Dresden, Ortsteil Striesen
ca. alle 8 Wochen, Donnerstag, 19.00 Uhr

Düsseldorf

Georg Verweyen
Georg.Verweyen@web.de
Bistro/Café Zicke
Bäckerstr. 5a (Ecke Bergerallee)
40213 Düsseldorf
Zweiter Mittwoch in ungeraden Monaten,
20 Uhr

Erlangen

Walter Schmidt, Peter Seitz
w.a.schmidt@gmx.net
Gaststätte »Erlanger Gärtla«
Marquardsenstraße 1
Dritter Dienstag im Monat, 19.00 Uhr

Freiburg

Heiko Oberdiek
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Wechselnder Ort
Dritter Donnerstag im Monat, 19.30 Uhr

Hannover

Mark Heisterkamp
heisterkamp@rrzn.uni-hannover.de
Seminarraum RRZN
Schloßwender Straße 5
Zweiter Mittwoch von geraden Monaten,
18.30 Uhr

Heidelberg

Luzia Dietsche
Tel.: 06221/544527
luzia.dietsche@urz.uni-heidelberg.de
China-Restaurant »Palast«
Lessingstraße 36
Letzter Mittwoch im Monat, 20.00 Uhr

Karlsruhe

Klaus Braune
Tel.: 0721/6084031
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Universität Karlsruhe, Rechenzentrum
Zirkel 2, 3. OG, Raum 316
Erster Donnerstag im Monat, 19.30 Uhr

Kiel

Karsten Heymann
karsten.heyman@gmx.de
Letzter Donnerstag des Monats, 19.00 Uhr
Ort siehe
<http://zauberer.net/latexwiki>

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Bruno Hopp

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*Institut für Kristallographie**Zülpicher Straße 49b**Letzter Mittwoch im Monat, 19.30 Uhr***München**

Michael Niedermair

m.g.n@gmx.de

*Wirtshaus »Löwe am Markt«**Dreifaltigkeitsplatz 4**Erster Dienstag im Monat, 19.00 Uhr***Münster**

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*Bar e Ristorante »Valle«**Geschwister-Scholl-Str. 3**Zweiter Dienstag im Monat, 19.30 Uhr***Wuppertal**

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Tel.: 02 02/50 63 81

schrell@wupperonline.de

*Restaurant Croatia »Haus Johannisberg«**Südstraße 10**an der Schwimmoper Wuppertal-Elberfeld**Zweiter Donnerstag im Monat, 19.30 Uhr***Zürich**

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nach Vereinbarung

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