out about new or upgraded packages, as well as continuing (in future editions) to feature packages that deal with specific topics.

It also seemed only logical to include an overview of CTAN's structure, as well as a few tips on how to try and identify packages that may well prove invaluable to your work: the trouble with a rich resource is that it's very hard to digest, and CTAN certainly can prove frustrating when you want to find a solution *now*!

Another new feature (end of the column) will be a list of upgrades to packages already described in past editions of this column so that you can confirm that you have the latest versions at your disposal.

So, let's start with some CTAN pointers, some notes on its structure, and then plough on into the inventory.

CTAN pointers

If you haven't visited CTAN or aren't sure there's anything there for you, here are some points to keep in mind.

1. If you're getting *TUGboat*, you've also been getting periodic updates of the CTAN holdings on a CD-ROM (produced by DANTE). Track it down if it's not on your shelf and use it as a quick way to access and examine packages. Of course, it's only a 'snapshot' but it already contains a massive quantity of material; if you find something you like, then all you need do is check CTAN periodically for any upgrades.

2. The easiest way to access CTAN itself is to use your web browser and head to `www.tug.org`, and then follow the links to CTAN (middle of the opening page, middle column, under 'Software'). Remember to add the useful pages to your booksmarks!

   The `ftp` links to the three backbone servers are there, as well as links to mirror sites around the world, and also to some handy search engines.

3. Some packages are contained within a single file while others may require several files to be fetched and then processed correctly. It's best to read any `readme` file to make sure you pick up all that's needed.

   Process the files on your machine, move the resultant files to where the instructions tell you, and then print up the documentation and put it in a binder. No point in having it somewhere in e-form if you prefer making notes by hand.

4. There are lots of ways of doing (almost) the same thing, so if one package doesn't quite work for you (provided you've done the right things to install it) it's quite likely that another package is lurking somewhere. The Treasure Chest

The Treasure Chest

CTAN, the Comprehensive TEX Archive Network, is a huge beast! And the TEX community is constantly feeding the creature with new packages and fonts and implementations and tools and utilities ... to the point where it seems impossible to know what's available and even then, *where* it's to be found.

So, in an effort to try and show you the richness of the feast available at the Archive, this edition of the Treasure Chest column will focus on a new component — a quarterly inventory of new packages. And while it's true that there are search mechanisms on the web for CTAN, not everyone has time to browse with their browser. We'd like this column to become another means of letting TEX users find

column is one small attempt at bringing packages to the fore, mainly with reference to a general topic: headings, or floats, or special layouts (critical editions, linguistics, music, etc.), and so on. If you can't find what you're looking for, a post to one of the newsgroups or lists can often dislodge a suggestion or two.

5. Another source of information on packages is the UK TUG's FAQ, also available via the TUG webpages.

6. You should also make a note that a directory may have a further `misc/` directory; this is often where very small packages are stowed.

7. And remember: it's often likely that a layout problem you're encountering has stumped someone else too, to the point where they sat down, solved their problem, and then decided to make their work available to the whole community.

If you're able to find your solution via CTAN, take a moment and send a thank-you note to the developer — they'll surely appreciate the acknowledgment.

CTAN and its subtrees

The top of the CTAN tree is `tex-archive`. The table on the next page shows the 16 subtrees (at present) and the purpose of each.

It helps to become familiar with these general categories so that you don't waste time looking for something in an unlikely subtree. For example, material related to BibTeX is found in the main subtree `biblio/bibtex/contrib/`, and not down in `macros/latex/contrib/supported/`.

To help you navigate around the archive and locate files there are some excellent webpages — I'd recommend bookmarking these two:

- `index.html`, found in `tex-archive`, lists the intent of each sub-tree

- In the above-mentioned HTML document, go to 'Help', and click on the 'catalogue', which is Graham Williams' 'The TeX Catalogue Online', which provides incredible options for locating and accessing packages old and new. The Brief Index (300K) has a short description of each entry and a link to the full entry.

If you have a favorite tool, let me know and we'll mention it in a future edition.

Packages posted to CTAN

Notes to keep in mind:

1. Packages are listed in the month of the latest upgrade; that is, if a version is posted in Oct. and a new version in Dec., only the newer one will be listed.

2. Monthly entries are in alpha-order, for easier reference.

3. Unless otherwise stated, packages are located in:

    `macros/latex/contrib/supported/`

However, there are two main branches under `contrib/`: `supported/` and `other/`. The default used here is `supported`, and where `other` is the location, its path will simply be noted as `.../other/`, to cut down on path length.

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bibunits: A package to provide multiple references in one document (upgrade to v. 2.1 provides compatibility with `overcite` and `natbib`, and makes `cite` more robust).

cmactex: in `nonfree/systems/mac/`
Upgrades: Two files, `doc.sit.bin` and `texmflib. sit.bin`, are replacements and contain minor corrections to existing archives. `Pdftex14c.sit.bin` is the Macintosh port of v. 0.14c of pdfTeX.

comment: in `.../other/`
A package to selectively in/exclude pieces of text: the user can define new comment versions, and each is controlled separately (upgrade to v. 3.6).

ctib4tex: in `language/tibetan/`
`ctib4tex` contains "Tibetan for TeX and LaTeX 2_ε", a package using a modified version of Sirlin's Tibetan font. The great advantage of this Tibetan implementation is that all consonant clusters are formed by TeX and METAFONT. No external preprocessor is needed.

dotlessi: in `.../supported/bezos/`
`Dotlessi` provides dotless i's and j's for use in any math font (`\mathrm`, `\mathsf`, etc.).

easy: A family of packages for equation environments, block matrices, tables, vectors, and customising bibliographies.

epmtfe: in `systems/os2/`
EPM TeX Front End is an integrated TeX environment for OS/2, based on the EPM editor. Some support was added for using the TeX Front End with VTeX/2 and for viewing PDF files (upgrade to v. 2.5).

fonteinf.pdf: in `info/german/`
This is a translation into German of `tipos.pdf`, kindly made by Thomas Ruedas.

geometry: This package provides an easy and flexible user interface to customize page layout. It implements auto-centering and auto-balancing mechanisms so that users have only to give the least description for the page layout (upgrade to v. 2.2).

gloss: `gloss` is a package which allows the creation of glossaries using BibTeX (upgrade to v. 1.4).

hyperref: This package is used to emend cross-referencing commands in LaTeX to produce some sort of `\special` commands. Upgrade v. 6.67 is a stabilizing release, committing all the small test enhancements made over the last few months. This includes

CTAN sub-trees

`biblio/` systems for maintaining and presenting bibliographies within documents typeset using TeX

`digests/` collections of TeX mailing list digests, TeX-related 'electronic magazines', and indexes, etc., of printed publications

`dviware/` printer drivers and previewers, etc., for `.dvi` files

`fonts/` fonts written in METAFONT, and support for using fonts from other sources (e.g., those in Adobe Type 1 format)

`graphics/` systems and TeX macros for producing graphics

`help/` FAQs and similar direct assistance; the catalogue

`indexing/` systems for maintaining and presenting indexes of documents typeset using TeX.

`info/` manuals and extended how-to information; errata for TeX-related publications, collections of project (e.g., LaTeX and NTS) documents, etc.

`language/` support for various languages

`macros/` TeX macros; several directories have significant sub-trees:

> `macros/context/` the Context distribution
>
> `macros/generic/` macros that work in several environments
>
> `macros/latex/` the LaTeX distribution and contributed matter
>
> `macros/plain/` Donald Knuth's example macro set

`support/` TeX support environments and the like

`systems/` TeX systems; organised by operating environment, but also including:

> `systems/knuth/` Donald Knuth's current distribution
>
> `systems/generic/` Complete systems that can potentially operate in more than one operating environment

`tds/` the TeX Directory Structure standard (the output of the TUG TDS working group)

`tools/` tools of use for the archive maintainers (including mirrors of the source of the compression tools the archives use)

`usergrps/` information supplied by TeX user groups

`web/` 'Literate Programming' tools and systems

For your information, the following names are found along with the 16 subtrees under `tex-archive` but are symbolically linked to one of the actual subtrees:

```
archive-tools --> tools/
bibliography  --> biblio/
dante         --> usergrps/dante
documentation --> info/
languages     --> language/
```

restructuring the source tree, putting test files and documentation in their own directories.

mathsPIC: in `graphics/pictex/`
MathsPIC is a DOS filter program for use with PiCTeX (v. 1.8f). There is a 37-page manual in `.tex`, `.dvi`, and `.ps` formats.

pdfscreen: This package helps to redesign the PDF output of your normal documents fit to be read in a computer monitor while retaining the freedom to format it for coventional printing.

pdfslide: This is a package for use with pdfTeX, to make nice presentation slides.

pitthesis: This is a LaTeX 2_ε document class package for writing theses at the University of Pittsburgh, PA.

pstoedit: in `support/`
> `pstoedit` converts PostScript and PDF files to other vector graphic formats so that they can be edited graphically.

rtf2latex2e: in `support/`
> `rtf2latex2e` converts Rich Text Format files to LaTeX 2ε. It runs on Mac, UNIX, Linux, and Win (upgrade to v. 0.263).

tipos.pdf: in `info/spanish/`
> Describes (in Spanish) the large variety of types of files for fonts (*tipo* means 'font' in Spanish).

topfloat: A package to move any type of float material to the top of the page.

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bizcard: A package for typesetting business/visiting/ calling cards (upgrade to v. 1.1).

ccfonts: A package and some of the necessary `.fd` files to use the Computer Concrete fonts with LaTeX.

expressg: in `graphics/metapost/contrib/macros/`
> This METAPOST package provides facilities to assist in drawing diagrams that consist of boxes, lines, and annotations. Particular support is provided for creating EXPRESS-G diagrams.

latex2rtf: in `support/`
> `latex2rtf` is a translator program that translates LaTeX text into the RTF format used by several text processors, including Microsoft Word and Word for Windows (patches to v. 1.8a). The distribution is made for use within the MS-DOS window of Win95 and Win3.11, but all sources can be compiled on UNIX computers having GCC compilers.

makefonts: in `fonts/utilities/`
> The package contains shell scripts which cause `.pk` files to be generated (upgrade to v. 2.0).

merlin: in `.../supported/custom-bib/`
> Part of the `custom-bib` package for generating customized BibTeX styles from a generic file by means of the `docstrip` program that is part of the LaTeX installation (upgrade to v. 4.00).

Metafp.ps: in `info/`
> A PostScript article entitled "Some Experiences in Running METAFONT and METAPOST."

multirow: Bug fixes to `multirow.sty`, and new package, `bigdelim`, an application of `multirow` for delimiters inside arrays and tabulars.

parskip: in `.../other/misc/`
> Package to be used with any document class at any size, which produces the following paragraph layout: zero `\parindent` and non-zero `\parskip`. The package is no more than a quick fix; the proper way to achieve effects as far-reaching as this is to create a new class.

permute: The `permute` package inputs, outputs and composes permutations (upgrade to v. 0.12).

qbibman: in `biblio/bibtex/utils/`
> `qbibman` is a graphical front-end to `BibTool` based on the Qt library.

rmligs: in `support/`
> This is a program for removing incorrectly used ligatures from LaTeX documents. This version is intended for German-language texts only.

scrnger: in `.../supported/koma-script/contrib/`
> The Koma-Script packages seek to implement European rules of typography and paper formats, as documented in Tschichold. `scrnge` adds support for the language `ngerman` to the current versions of `scrlettr.cls` and `scrdate.sty`.

snapshot: This package helps users obtain a list (a 'snapshot') of the external dependencies of a LaTeX document, in a form that can be embedded at the top of the document. Such a dependency list makes it possible to arrange that the document be processed is always with the same versions of everything, in order to ensure the same output.

Songbook: The package provides a core set of functions for the production of songbooks (upgrade to v. 3.1). See also: `cyberus.ca/~crath/Misc/Songbook/`.

TeEncontreX: in `documentation/spanish/`
> Documentation that attempts to collect and centralize all the available data about TeX so that anyone can find information in one place. People can add new articles (very easily) to the database. All its contents may be found at `ctv.es/USERS/ irmina/TeEncontreX.html`.

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aeguill: A package intended to add French guillemets to the `ae` package. The guillemets are built with the `wncyr` fonts (by default), or with either the `lasy` fonts or the EC fonts (upgrade to v. 0.97).

bakoma: in `nonfree/systems/win32/`
> Upgrade of BaKoMa TeX (v. 2.21). For more information about changes: `.../win32/bakoma/dst/ changes.html`.

BibTool: in `biblio/bibtex/utils/`
> `BibTool` allows the manipulation of BibTeX files in a way that goes beyond the possibilities — and intentions — of BibTeX (upgrade to v. 2.44).

braket: in `.../other/misc/`
> Macros for Dirac bra-ket `<|>` notation and sets `{|}` (update). Fixed and expanding sizes provided. This minor revision will use ε-TeX's `\middle` primitive if it is available.

calxxxx: in `.../other/`
> `calxxxx.tex` prints a card-size calendar for any year, AD or BC, with Gregorian or Julian leap rules (useful for years before the adoption of Gregorian rules).

contour: The package generates a colored contour around a given text in order to enable printing text over a background without the need for a color box around the text (upgrade to v. 1.03).

dichokey: The package can be used to construct dichotomous identification keys (used especially in

biology for species identification), taking care of numbering and indentation of successive key steps automatically. Run the example file!

dvii: in `dviware/`

`dvii` (`.dvi` file information utility) is a utility written in C that extracts information from a TEX `.dvi` file (upgrade to v. 0.27).

extsizes: in `.../other/`

This package provides two classes: `extarticle` and `extreport`, which allow for documents with a base font of size 8–20pt.

fotex: in `macros/`

Package used to process XSL formatting objects when serialized as XML by an XSL processor (package updates).

grverb: in `languages/greek/package-babel/`

This package addresses the issue of writing both Latin and Greek verbatim text, particularly useful for computer listings and, more generally, in computer science-related texts. A public domain font is used by both the command and the environment. The font conforms to the ISO-8859-7 encoding for the Greek language.

jadetex: in `macros/`

Package used to process the output of the Jade DSSSL processor in its TEX mode (package updates).

lgrind: in `support/`

`LGrind` is a source code pretty-printer; it converts program text from many languages into LATEX. This new version features a Python mode (upgrade to v. 3.64).

ltx2x: in `support/`

The `ltx2x` program (written in C) replaces LATEX commands in a document by user-defined strings. In essence, LATEX tags can be replaced by other kinds of document tags (e.g., HTML/SGML or RTF) or can be removed altogether (deTEXed). The program also has an unsophisticated pretty-print capability (upgrade to v. 0.92).

matlabweb: in `web/`

A literate programming system for the Matlab language. Similar to `CWEB`, created with a slightly modified version of the Spider system. Can be used with plain TEX or LATEX, the latter with help from the `webfiles` package.

miktex: in `systems/win32/miktex/1.20`

MiKTEX is a free TEX distribution for Windows 9x and Windows NT. The latest release is 1.20, to be found in the `1.20` sub-folder.

nestquot: in `.../other/`

Quotes that change between double and single according to their nesting level.

passivetex: in `macros/`

Shared macros for JadeTEX and FOTEX, include the XML parser and UTF8 handler (written by David Carlisle), and all the general support for characters in Unicode (package updates).

psrip: in `support/`

A Perl script that extracts images from PostScript files.

rcs.patch: in `.../rcs/contrib/`

A patch for the `rcs` package, which utilizes the inclusion of RCS-supplied data in LATEX documents.

refcheck: `refcheck.sty` is intended to check references. It looks for numbered but unlabelled equations, for labels not used in the text, for unused bibliography references (upgrade to v. 1.6).

texshell32: in `systems/win32/`

This program is a free shell for the typesetting system TEX. It runs under Windows 95, 98 and NT (upgrade to v. 0.61).

ut-thesis: A class file for formatting documents according to the School of Graduate Studies' (SGS) guidelines (07/97) for theses at the University of Toronto (upgrade to v. 1.8).

webfiles: in `web/`

A LATEX package for inclusion of several CWEB and/or Spidery WEB documents in a single LATEX document.

Tour package upgrades

acronym: New version: 1.4, dated 2000/02/09.
The package is for: acronyms, mottos, topical quotations; full and short versions; auto-generation of acronym listing (*TUGboat* 20,1).

epigraph: New version: 1.5, dated 2000/02/20.
The package is designed for typesetting epigraphs — pithy quotations often found at the start (or end) of a chapter (*TUGboat* 20,1).

hanging: New version 1.1, dated 1999/05/01.
The package provides facilities for defining hanging paragraphs and hanging punctuation (*TUGboat* 20,1).

paralist: New version: 1.9, dated 2000/03/05.
The package provides itemized and enumerated lists that can be typeset within paragraphs, as paragraphs and in a compact version (*TUGboat* 20,1).

soul.sty: New version: 1.3, dated 1999/05/15.
The package provides hyphenate-able letterspacing, underlining, and some variations on each (*TUGboat* 19,4)

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