

Tools for creating bibliographic databases for use with Bib \TeX

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Abstract By using Bib \TeX we can easily change the style of Bibliography/References according to the style of the journal. But creating bibliographic databases for use with Bib \TeX is very cumbersome. This article describes the various software tools available for creating bibliographic databases easily, particularly for the Windows platform.

1 Introduction

One of the major advantages of using \LaTeX is ease of inclusion of bibliographies in conjunction with Bib \TeX . Various bibliographic style files (bst) are available for different journals and publishing houses. Using these bst files the format and citation style can be changed easily[1]. This facility is not available in commercial wordprocessors or desktop publishing systems. Creating Bib \TeX databases is also discussed in \LaTeX Tutorials[2] and by Parthasarathy[3].

Bibliographic databases for Bib \TeX can be created using ordinary editors but it is tedious work involving a lot of typing. But once created, the same data can be used many times and by many users.

A search on the Internet for Bib \TeX database managers gives a long list of free and commercial software¹. To name a few: bibtex mode and Ebib (for Emacs), Pybliographer (using Python for Linux), gBib (for GNOME, Linux), Barracuda (for Linux), KBibTeX (for KDE, Linux), Sixpack (multi platform), JBibtexManager, Javabib and JabRef (multi platform using Java), BibDB (for DOS and Windows),

1. <http://www.google.com/Top/Computers/Software/Typesetting/TeX/BibTeX/>

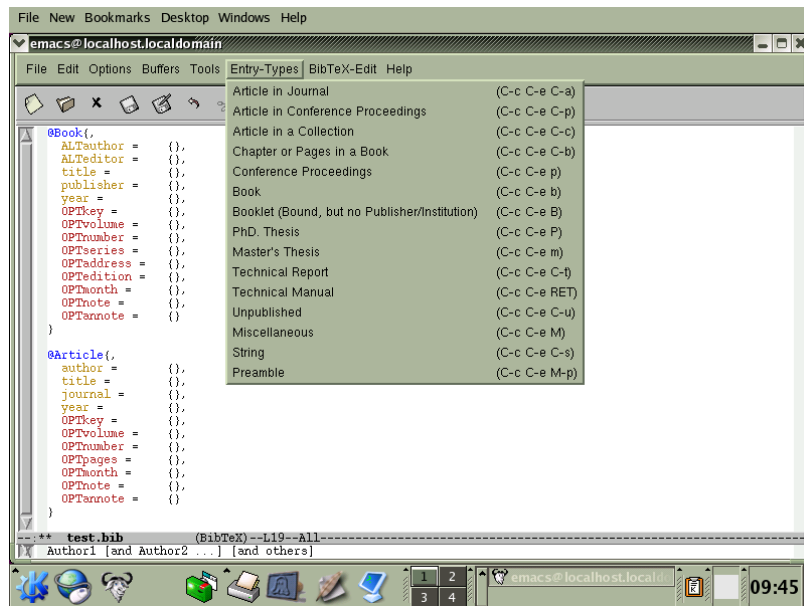


Figure 1: Editing BibTeX files in Emacs

BibTexMng (for Windows) and TkBibTeX (multi platform using Tcl/Tk) are some of them. In this article we discuss various software systems available for creating bibliographic databases.

2 Editor-based systems

2.1 Emacs

My first experience was with Emacs. Emacs is a multipurpose editor and, like TeX, is available for various platforms and is free². When we save a file, it scans the extension and the menus and behaviour of Emacs changes. It has a BibTeX mode. (This is activated by 'bibtex.el'. By default it should be installed with Emacs. Otherwise one has to download and install it.) When this mode is present, the moment we save a file with the 'bib' extension the menu changes and a menu item 'Entry-Types' appears, with various types of bibliography categories. On selecting the category of a bibliography item a template will be added to the

2. <http://www.gnu.org/software/emacs/>

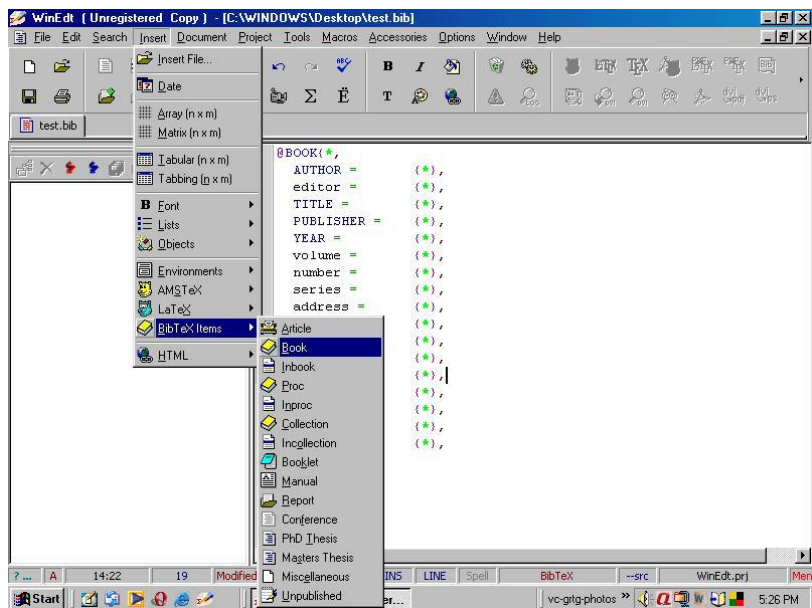


Figure 2: Creating bibliography data base in WinEdt

file. Now we just have to fill the various fields. The optional fields are indicated with 'OPT'. In addition the fields are also colour-coded for visual differentiation. Figure 1 shows a screen shot of Emacs, with empty fields ready to fill for a book, and the menu for bib.

We have not tried the 'Ebib' for Emacs. From the description given for this mode it appears it is better than the BibTeX mode of Emacs. Though the professionals in *nix world love Emacs due to its versatility, it has a steep learning curve.

2.2 WinEdt

WinEdt is a shareware editor distributed with MikTeX for MS Windows platform³. It also has a feature similar to that of Emacs. The only difference is it creates a star symbol where one has to replace it with actual data. It is advised to remove all these stars before saving the file or starting a new bibliographic entry. Otherwise these stars will create a problem when compiling the TeX documents. Figure 2

3. <http://www.winedt.com>

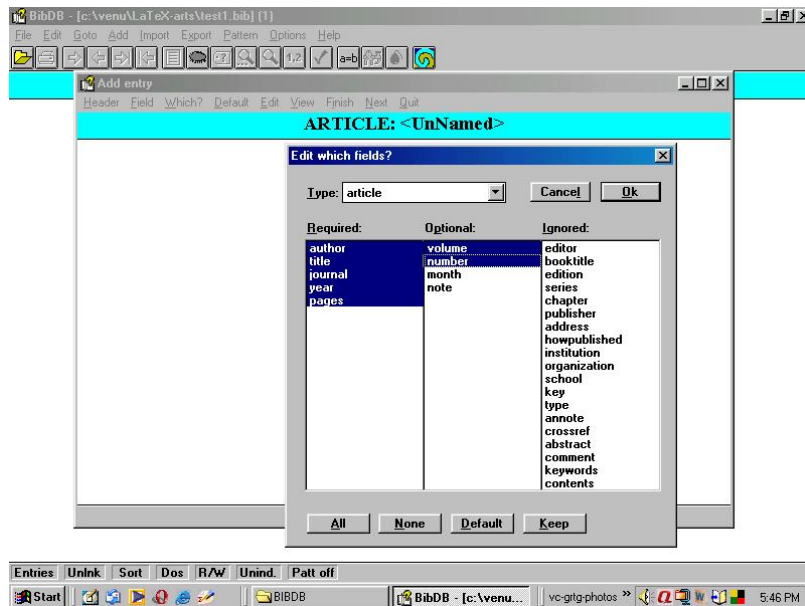


Figure 3: BibDB with fields selected

shows the screen shot of WinEdt ready for entering the bibliographic data. In WinEdt the compulsory fields are shown in capital letters whereas the optional fields are in lower-case letters. When starting a new entry care must be taken so that the cursor is outside the entry. Otherwise there may be problems when typesetting the document.

3 Dedicated bibliographic database software

In this category we have BibDB, TkBibTeX, BibTeXMng, BibEdit, Pybliographer, gBib, Barracuda, KBibTeX, Sixpack, JBibtexManager, Javabib, and JabRef. Of these, BibTeXMng is a shareware program. The programs available for Linux platform are not taken up, as they are more technically oriented. Java-based programs were not evaluated. The link for BibEdit happened to be a dead link. So only BibDB and TkBibTeX are discussed here.

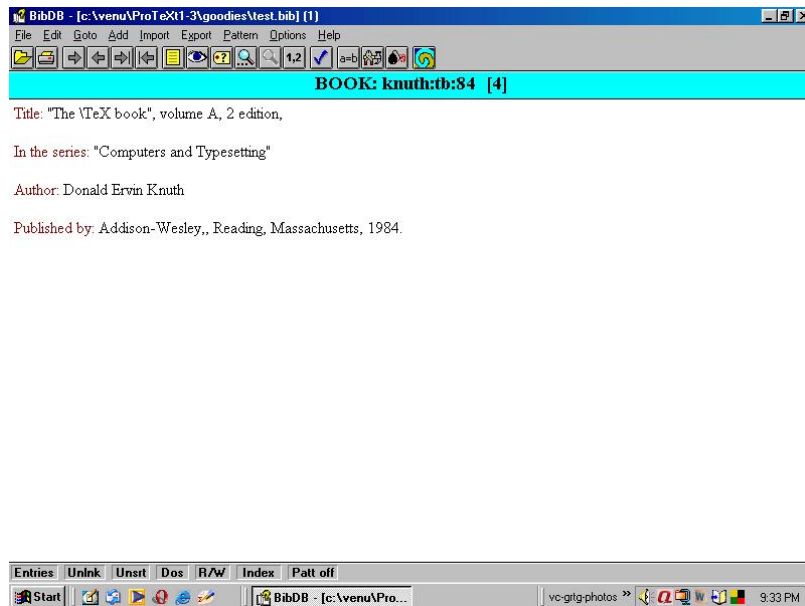


Figure 4: Bibliographic data in BibDB

3.1 BibDB

BibDB is a full fledged bibliographic database software for Windows. It is created by Eyal Doron[4] and is freely available from CTAN⁴. A search for BibDB found several software systems with the same name. The other BibDB is actually a BibTeX to DocBook translator.

BibDB was first created for MS DOS and later ported to MS Windows. The source code, in Turbo Pascal, is also available. MacKichan Software, makers of Scientific Word (a commercial version of L^AT_EX), also bundles BibDB along with their software.

After starting BibDB, the first step is to open a 'bib' file. Once this is done all the menu items are activated. To enter data, first select the 'add' menu, which will open another window 'Add entry'. Here chose the menu item 'Which?'. Then another window 'Edit which fields?' pops up (See Fig. 3). Select the type of entry, for example article, book, booklet, etc. The fields will change depending on the type of entry selected. For example, if `article` is selected, *author*, *title*, *journal*,

4. <http://www.ctan.org/tex-archive/support/bibdb>

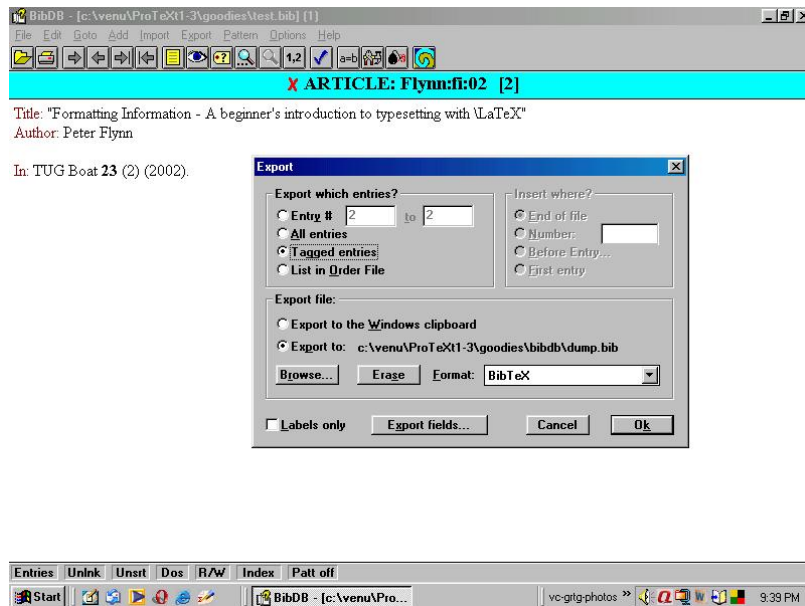


Figure 5: Exporting selected bibliographic data in BibDB

year, pages are the 'required' fields, *volume, number, month, note* are 'optional' fields and all other fields are under the category 'ignored'. Once the desired fields are selected, press 'OK' and then the actual input can begin. After filling a field, press 'Next' till all fields are filled. When all fields are filled the window goes back to 'Add entry' and shows all the fields as in Fig. 4. Now choose 'Finish', and it will create a key. Either accept it or change it. After this the entry will be added to the 'bib' database file.

The main advantage of BibDB is that it shows data in a clean reference card pattern (Fig. 4). One can search the database by key or any other expression. BibDB automatically sorts the database and arranges it in alphabetical order.

Sometimes the publisher may request the bibliographic data in a 'bib' file. With BibDB it is very easy. Just select the required references, then press 'Export'. A window will pop up as in Fig. 5. Select 'Tagged entries', select the format, and press 'OK'. The output will be saved as 'dump.bib'. Now the file is ready to send. Using BibDB, one can import or export the data to Tib, Refer, and Comma-delimited formats.

The other advantage with BibDB is customisation. It can be used as a Personal

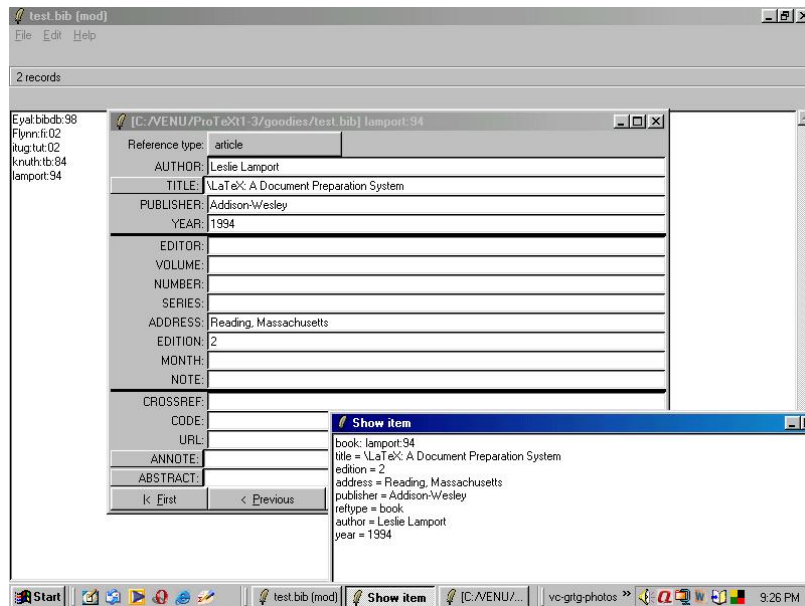


Figure 6: The interface of TkBibTeX

Information Manager (PIM) for keeping addresses and contact information. In conjunction with the package 'Directory', beautiful address books, address lists, telephone lists, e-mail lists can be created. These features will be discussed in a separate paper.

3.2 TkBibTeX

TkBibTeX was first created by Peter Corke and can be downloaded from CTAN⁵. The present version is modified by G. Milde. A reference to it was made by Flynn[5]. It is based on the Tcl/Tk (Tool Command Language and Tool Kit) created by John Ousterhout. Tcl/Tk is an interpreted language and like \TeX it is also platform independent and is available for Win32, UNIX, Linux, and Mac platforms. Tcl/Tk can be freely downloaded from the internet⁶. The same script can be used on all platforms and the look and feel will be the same. Though a comprehensive help is provided with the GUI of TkBibTeX, the author's home

5. <http://www.ctan.org/tex-archive/biblio/bibtex/utils/tkbibtex>

6. <http://www.tcl.tk/software/tcltk/>

page gives the various ways of using it for better results⁷.

In TkBibTeX two screens are provided. The first screen shows the various reference items by key. On selecting a reference item, or on selecting 'New Entry' in the 'Edit' menu, the other screen opens. This is further divided into three parts. The first part contains the compulsory fields, the second part contains the optional fields, and the third part contains the ignored fields (Fig. 6). The difference with BibDB is, in BibDB the key is created in the last whereas in TkBibTeX it should be provided in the beginning itself.

4 Conclusion

In this paper only Emacs, WinEdt, BibDB, and TkBibTeX are discussed. The screen shots of other software systems shown on their respective web sites are enticing. However, the author was unable to install these programmes for a proper evaluation.

Though there are several methods of creating bib files and databases, the tools reviewed here are the ones the author found workable and best suited to his needs.

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About the author

Mr. Venugopal, a secretarial assistant by profession, fell in love with T_EX/L^AT_EX in the year 2000. A former admirer of WordPerfect, his first encounter with T_EX/L^AT_EX was as a result of a challenge from a colleague. His hobbies are exploring various T_EX packages, experimenting with Omega/Lambda, METAPOST and METAFONT, and teaching and/or explaining the advantages of T_EX/L^AT_EX over word processors. From time to time he conducts L^AT_EX training for research

7. <http://www.cat.csiro.au/ict/staff/pic/tkbibtex.html>

scholars in Banaras Hindu University. He has contributed three articles to The PracT_EX Journal.

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