

BLUe's Bibliography— selective loading

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Abstract

In addition to the earlier method of maintaining a database in T_EX, it is shown how to load the entries selectively, without modifying the entries of the database

Keywords: Literature database, bibliography, plain T_EX, macro writing, education.

1 Introduction

As proposed in my BLUe's Bibliography paper, I like to supply each entry in a (near) natural way, as suggested by the following example

```
Knuth D.E (1984):
The \TeX book.
Addison-Wesley.
ISBN 0-201-13447-0 (hard cover)
ISBN 0-201-13448-9 (soft cover).
(For the right printing look for
\cs{language}, or \cs{emergystretch}
in the index.)
```

which obeys the syntax

```
<name part> (<date part>):
<title part>
<rest>
```

In my use of the above I encountered no problems. The question is whether something easy can be done about the redundancy of loading all entries.

2 Selecting entries.

To remind the reader this section has been copied from the earlier article.

For selecting I made use of the active list separator `\ls`, with context dependent meaning. When the database file consists of the entries

```
\def\knuthded
{Knuth D.E (1984):
The \TeX book. \aw.
ISBN 0-201-13447-0 (hard cover),
0-201-13448-9 (soft cover).
(For the right printing look for
\cs{language}, or \cs{emergystretch}
in the index.)}
\def\knuthdeg
{Knuth D.E (1986):
The \mf book. \aw.
ISBN 0-201-13445-4 (hard cover).}
```

then for selecting them all, supply

```
\ls\knuthded \ls\knuthdeg
```

Selective loading.

The above proposal loads all the definitions from the database file in T_EX's memory. Knuth in *The T_EXbook*, Appendix D, p. 384, suggests to load only the definitions needed. The critical memory component—if any¹ with a reasonable database of entries—are the 'words of memory.' How much, and which, memory is used, can be requested via `\tracingstats=1`.

Of course there is truth in Knuth's suggestion and I decided to do some experiments for the cases

- no references at all
- insert those needed manually in the copy
- load selectively
- load all definitions.

The 'words of memory' used with the file of my original bibliography article as test are²

<i>no refs</i>	<i>insert man</i>	<i>load selectively</i>	<i>load all</i>
21.5	22.5	27	51.5
–	1	5.5	30

As expected, there is some overhead in the selective loading process. The gains compared with loading all definitions is indeed significant.

I did not like the idea of modifying the database for flexibility reasons. Therefore, I used the following trickery for selective loading, with the syntax of the database elements given earlier and based on `\def` as the name of a macro.

```
\let\x\def%or any name for x
\x\def#1{\ifx#1\undefined\ea\gobble
\else \ea\x\ea#1\fi}
\input lit.dat
\let\def\x
```

As its name suggests `\gobble` eats its argument.

References

The T_EXbook, and

- [1] Laan C.G van der (1993): BLUe's Bibliography—a generic approach. MAPS 93.2, 205–210.

¹I have typeset reasonable large articles—an odd thirty pages with some 15 references out of 250—with as format `tugboat.sty`, without memory problems of yet. In my opinion it is not a problem at all on a reasonable 'intermediate' T_EX system, because one can always include the references manually in the pen-ultimate proofs, and work in the meantime with labels or some other mnemonic aid. Remember that the entries have been proofed earlier.

²In units of kbytes. The second data row contains the values corrected for the no references situation, that is 21.5 kbyte is subtracted.