

title : Module Documentation

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#### 1 Introduction

The bibliographic module (t-bib.tex) takes care of references to publications and the typesetting of publication lists, as well as providing an interface between BibTEX and ConTEXt. This manual documents version 2006.03.13.

The bibliographic subsystem consists of the main module t-bib.tex; four BibTeX styles (cont-xx.bst); and a set of example configuration files (bibl-xxx.tex) that set up specific formatting styles for both the citations and the list of references.

#### 1.1 General overview

A typical input file obeys following structure:

- 1. A call to \usemodule[bib].
- 2. Optionally, a few setup commands for the bibliographic module.
- 3. A number of definitions of publications to be referenced in the main text of the article. The source of these definitions can be a combination of:
  - THe \jobname.bbl file (automatically read at \starttext)
  - extra bbl files
  - a file or inline macros before \starttext

These possibilities will be explained below. For now, it is only important to realize that of all these definitions have to be known before the first citation in the text.

- 4. \starttext
- 5. The body text, with a number of \cite commands.
- 6. The list of publications, called using the command \placepublications or the command \completepublications.
- 7. \stoptext

#### 2 Setup commands

Bibliographic references use a specific 'style', a collection of rules for the use of \cite as well as for the formatting that is applied to the publication list. The ConTEXt bibliographic module expects you to define all of these style options in one single file of which the names starts with the prefix bibl-.

Unlike the normal situation in LATEX, this style *also* includes the formatting of the items themselves. Because of this, the .bbl file is set up as a database of entries with fields.

### 2.1 Global settings: \setuppublications

The most important user-level command is \setuppublications. Most of the options to this command should be set by the bibliography style file, but a few of them are of immediate interest to the casual user as well.

Like all setup commands, thus command should be given before \starttext, as it sets up global information about the bibliographic references used in the document. ConTEXt needs this information in order to function correctly.

alternative This gives the name of a bibliography style.

The chosen style defines the other default options, the options given in this documentation are the defaults as they are set up by the 'apa' style. When this argument is given, the newly set style is read in first, before the other options are processed. Thus allowing you to override specific settings from the chosen style.

refcommand the default option for \cite

sorttype How the publications in the final publication list should be sorted. 'cite' means: by

the order in which they were first cited in your text. 'bbl' tells the module to keep the

relative ordering in which the publication definitions were found

The current default for apa is 'cite'

criterium Whether to list only the referenced publications or all of them.

If this value is 'all', then if 'sorttype' equals 'cite', this means that all referred-to publications are listed before all others, otherwise (if 'sorttype' equals 'bbl') you will just

get a typeset version of the used database(s).

The default for apa is 'used'

numbering Whether or not the publication list should be labelled and if so, how. yes uses the item

number in the publication list as label. short uses the short label. bib uses the original number in the BibT<sub>F</sub>X database as a label. Anything else turns labelling off.

number in the bib iga database as a laber. Anything else turns labern

The default for apa is 'no'

autohang Whether or not the hanging indent should be re-calculated based on the real size of the

label. This option only applies if numbering is turned on.

The default is 'no'.

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## 2.2 How the entries are formatted: \setuppublicationlist

```
\setuppublicationlist [..,.\stackrel{*}{=}.,..]
   totalnumber
                         = NUMBER
   samplesize
                         = TEXT
                         = \underline{a} b c ... none command
   alternative
                         = SECTION local previous <u>current</u> all
   criterium
   pagenumber
                         = yes <u>no</u>
                         = \normalauthor \normalshortauthor \invertedauthor
   artauthor
                            \invertedshortauthor
                         = \normalauthor \normalshortauthor \invertedauthor
   author
                            \invertedshortauthor
                            \normalauthor \normalshortauthor \invertedauthor
   editor
                            \invertedshortauthor
                         = TEXT
   namesep
   lastnamesep
                         = TEXT
   finalnamesep
                            TEXT
   firstnamesep
                         = TEXT
   juniorsep
                         = TEXT
                         = TEXT
   vonsep
   surnamesep
                         = TEXT
   authoretallimit
                         = NUMBER
   authoretaltext
                         = TEXT
   authoretaldisplay
                            NUMBER
                        NUMBER.
   artauthoretallimit
   artauthoretaltext
                         = TEXT
   artauthoretaldisplay = NUMBER
   editoretallimit
                         = NUMBER
   editoretaltext
                         = TEXT
   editoretaldisplay
                            NUMBER
   inherits from \setuplist
```

The list of publications at the end of the article is essentially a normal context 'list' that behaves much like the list that defines the table of contents, with the following changes:

The module defines a set of extra options. These option names are static, they do *not* change to follow the selected ConT<sub>E</sub>Xt interface language.

The first two options provide default widths for 'autohang':

totalnumber The total number of items in the following list (used for autohang). Samplesize The longest short label in the list (used for autohang)

The other extra options are needed to control micro-typesetting of things that are buried deep within macros. There is a separate command to handle the larger layout options (\setuppublicationlayout, explained below), but the options here are the only way to make changes in the formatting used for editors', authors', and article authors' names.

editor command to typeset one editor in the publication list.

author command to typeset one author in the publication list.

artauthor command to typeset one article author in the publication list.

namesep the separation between consecutive names (either editors, authors or artauthors).

lastnamesep the separation before the last name in a list of names.

firstnamesep the separation following the fistname or inits within a name in the publication list.

juniorsep likewise for 'junior'. vonsep likewise for 'von'. surnamesep likewise for surname.

#### **Bibliographies**

The commands after 'editor' e.g. are predefined macros that control how a single name is typeset. The four supplied macros provide formatting that looks like this:

\invertedauthor von Hoekwater jr Taco
\invertedshortauthor von Hoekwater jr T
\normalauthor Taco von Hoekwater jr
\normalshortauthor T von Hoekwater jr

As you can see in the examples, there is a connection between certain styles of displaying a name and the punctuation used. Punctuation in this document has been set up by the 'ap' style, and that style makes sure that \invertedshortauthor looks good, since that is the default command for 'apa' style. (Keep in mind that the comma at the end of the author will be inserted by either 'namesep' or 'lastnamesep'.)

In case you are not happy with the predefined macros; it is quite simple to define one of these macros yourself, it is a simple macro with 5 arguments: firstnames, von-part, surname, inits, junior.

For example, here is the definition of \normalauthor,

```
\def\normalauthor#1#2#3#4#5%
  {\bibdoif{#1}{#1\bibalternative{firstnamesep}}%
  \bibdoif{#2}{#2\bibalternative{vonsep}}%
  #3\bibalternative{surnamesep}%
  \bibdoif{#5}{#5\unskip}}
```

but commands can be a lot simpler, like this:

```
\def\surnameonly#1#2#3#4#5{#3}
\setuppublicationlist[editor=\surnameonly]
```

Apart from these extra options, the module itself sets some of the options to the internal call to \setuplist itself.

To get a reasonable layout for the reference list, the following are set as a precaution:

alternative Always re-initialized to 'a'. This makes sure that no space is allocated for the page

number.

pagenumber Always re-initialized to 'no'. The list is a bit of a special one, and page numbers don't make much sense. All entries will have the same page number: the number of the page

on which  $\placepublications$  was called.

interaction Alway made empty. There should never be any interactivity in the list of publica-And also, the following options are initialized depending on the global settings for 'numbering' and 'autohang':

width Set to the calculated width of the largest label, but only if autohang is 'yes'

distance Set to 0pt, but only if autohang is 'yes'

number command A command given in 'setuppublications' if numbering is turned on, otherwise

empty.

textcommand Set to a macro that outdents the body text if numbering is turned off, otherwise

empty

# 2.3 Setting citation options: \setupcite

The \cite command has a lot of alternatives, as could be seen above in the setting of 'refcommand'. And these alternatives have their own options:

```
\setupcite [\ldots, 1, \ldots] [\ldots, 2, \ldots]
   author year authoryears key serial page short type data doi url num
                 TFXT
   andtext
   otherstext
                 TEXT
   pubsep
                 TEXT
   lastpubsep = TEXT
   compress
                 yes no
   inbetween
                 TEXT
   left
               = TEXT
   right
               = TEXT
```

```
andtext separation between two authors (for \cite [author] styles) otherstext text used for 'et.al.' (for \cite [author] styles)
```

pubsep separator between publication references in a \cite command.

lastpubsep same, but for the last publication in the list.

left left side of a \cite (like [)

inbetween the separator between parts of a single citation.

right right side of a \cite (like ])

compress Whether \cite should try to compress it's argument list.

Not all options apply to all types of \cite commands. E.g. 'compress' does not apply to the citation list for all options of \cite, since sometimes compression does not make sense or is not possible. The 'num' version compresses into a condensed sorted list, and the various 'author' styles try to compress all publications by one author, but e.g. years are never compressed.

Likewise, 'inbetween' only applies to three types: 'authoryear' (a space), 'authoryears' (a comma followed by a space), and 'num' (where it is '--' (an endash), the character used to separate number ranges).

# 2.4 Setting up BibTEX: \setupbibtex

Bib $T_EX$  bibliographic databases are converted into .bbl files, and the generated file is just a more  $T_EX$ -minded representation of the full database(s).

The four .bst files do not do any actual formatting on the entries, and they do not subset the database either. Instead, the *entire* database is converted into TEX-parseable records. About the only thing the .bst files do is sorting the entries (and BibTEX itself resolves any 'STRING' specifications, of course).

The module will read the created \jobname.bbl file and select the parts that are needed for the current article.

```
\setupbibtex [..,**..]

* database = FILE
    sort = title author short no
```

database List of bibtex database file names to be used. The module will write a very short .aux file instructing BibTEX to create a (possibly very large) \jobname .bbl file, that will be \input by the module (at \starttext).

sort How the publications in the BibTEX database file should be sorted.

The default here is 'no' (cont-no.bst), meaning no sorting at all. 'author' (cont-au.bst) sorts alphabetically on author and within that on year, 'title' (cont-ti.bst) sorts al-

phabetically on title and then on author and year, and 'short' (cont-ab.bst) sorts on the short key that is generated by BibT<sub>F</sub>X.

For now, you need to run BibTEX by hand to create the \jobname.bbl file (texutil will hopefully do this for you in the future).

You may want to create the \jobname.bbl yourself. The .bbl syntax is explained below. There is no default database of course, and you do not have to use one: it is perfectly OK to just \input a file with the bibliographic records, as long as it has the right input syntax. Or even to include the definitions themselves in the preamble of your document.

The most efficient calling order when using BibTEX is:

```
texexec --once myfile
bibtex myfile
texexec myfile
```

Texexec should be smart enough to recognize how many runs are needed in the final part, but it seems it sometimes does one iteration too few. So you might have to call texexec one last time to get the page references correct. Numbered references always need at least one run more than author, year references, because the final number in the reference list is usually not decided upon yet at the moment the \cite command is encountered.

### 2.5 Borrowing publications: \usepublications

It is also possible to instruct the module to use the bibliographic references belonging to another document. This is done by using the command \usepublications[files], where files is a list of other ConTeXt documents (without extension).

```
\usepublications [.*.]
* FILE
```

To be precise, this command will use the .bbl and .tuo files from the other document(s), and will therefore not work if these files cannot be found (the .tuo file is needed to get correct page references for \cite[page]).

#### 3 Citations

Citations are handled through the \cite command.

\cite has two basic appearances:

# 3.1 Default and explicit citations

```
\cite [.1.] [...2...]

OPTIONEEL

1 author year authoryears key serial page short type doi data url num

2 REFERENCE
```

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The single-argument form executes the style-defined default citation command. This is the preferred way of usage, since some styles might use numeric citations while others might use a variation of the (author, year) style.

The two-argument form allows you to manually select the style you want.

#### 3.1.1 Citation types

Following is the full list of recognized keywords for \cite, with a short explanation where the data comes from. Most of the information that is usable within \cite comes from the argument to \startpublication. This command is covered in detail below.

All of these options are *valid* in all publication styles, since ConTEXt always has the needed information available. But not all of these are *sensible* in a particular style: using numbered references if the list of publications itself is not numbered is not a good idea, for instance. Also, some of the keys are somewhat strange and only provided for future extensions.

First, here are the simple ones:

```
author (Hoekwater)
                                                          (from 'a')
                                                          (from 'd')
doi
         [http://dx.doi.org/]
key
         [me]
                                                          (from 'k')
                                                          (from 'n')
serial
         [1]
         [TH2006]
                                                          (from 's')
short
         [manual]
                                                          (from 't')
type
year
         (2006)
                                                          (from 'y')
url
         [http://contextgarden.net/Bibliography]
                                                          (from 'u')
```

Keep in mind that 'n' is a database sequence number, and not necessarily the same number that is used in the list of publications. For instance, if 'sorttype' is cite, the list will be re-ordered, but the 'n' value will remain the same. To get to the number that is finally used, use

num [1] (this is a reference to the sequence number used in the publication list)

If the list of publications is not numbered visually, there will still be a number available.

Three of the options are combinations:

```
authoryear Hoekwater (2006) (from 'a' and 'y')
authoryears (Hoekwater, 2006) (from 'a' and 'y')
data Taco Hoekwater ConTEXt Publication Module, The user documententation. 12p. In case you didn't know: it's the document you are reading now.
```

And the last one is a page reference to the page where the entry is typeset within the publication list.

```
page [12] (a page reference)
```

#### 3.2 Citations with local setups

The arguments in this form are inherited from \setupcite, except for extras. The argument of 'extras' is typeset at the end of the reference, but before a potential 'right', so it can be used for e.g. page or chapter specifiers.

#### 4 Placing the publication list

This is really simple: use \completepublications or \placepublications at the location in your text where you want the publication list to appear. As is normal in ConTeXt, \placepublications gives you a raw list, and \completepublications a list with a heading. The module uses the following defaults for the generated head:

```
\setupheadtext[en] [\biblistname=References]
\setupheadtext[nl] [\biblistname=Literatuur]
\setupheadtext[de] [\biblistname=Literatur]
\setupheadtext[it] [\biblistname=Bibliografia]
\setupheadtext[sl] [\biblistname=Literatura]
\setupheadtext[fr] [\biblistname=Bibliographie]
```

These (or new ones) can be redefined as needed.

#### 5 The bbl file

A typical bbl file consists of one initial command (\setuppublicationlist) that sets some information about the number of entries in the bbl file and the widths of the labels for the list, and that command is followed by a number of appearances of \startpublication ... \stoppublication

The full appearance version of \cite accepts a number of option keywords, and we saw earlier that the argument of the \startpublication command defines most of the things we can reference to. This section explains the precise syntax for \startpublication.

Each single block defines one bibliographic entry. I apologise for the use of single-letter keys, but these have the advantage of being a) short and b) safe w.r.t. the multi-lingual interface.

```
\startpublication [...,*..] ... \stoppublication

* k = TEXT
a = TEXT
y = TEXT
n = TEXT
s = TEXT
t = TEXT
t = TEXT
u = TEXT
o = TEXT
```

g

Here is the full example that has been used throughout this document:

#### 5.1 Defining a publication

The list of commands that is allowed to appear between \startpublication and \stoppublication is given below.

Order within an entry is irrelevant, except for the relative ordering within each of the three commands that might appear more than once: \artauthor, \author and \editor.

Most of these are 'normal' BibTEX field names (in lowercase), but some are extra special, either because they come from non-standard databases that I know of, or because the bst file has pre-processed the contents of the field.

### 5.1.1 Complex fields

The three fields that contain names are extra special, because they have more than one argument. These are: \artauthor, \author and \editor. At the moment, these commands require exactly 5 arguments (of which two look like optional arguments, but they are not)

\artauthor[#1]{#2}[#3]{#4}{#5}	AUTHOR	For an author of any publication that appears within
		a larger publication, like an article that appears
		within a journal or as part of a proceedings.
\author[#1]{#2}[#3]{#4}{#5}	AUTHOR	The author of a standalone publication, like a mono-
		graph.
$\left[ 1 \right] { #2} [ #3] { #4} { #5}$	EDITOR	The editor of e.g. an edited volume.

# 5.1.2 Simple fields

Rather a large list, this is caused by the desire to support as many existing BibTEX databases as possible. Please note that a few of the fields have names that are not the same as in BibTEX, because a 1 on 1 mapping causes conflicts with predefined macro names in ConTEXt.

\abstract	ABSTRACT	just text.
\annotate	ANNOTATE	just text.
\arttitle	TITLE	The title of a partial publication (one that has \artauthors).
\assignee	ASSIGNEE	Assigned person for a patent
\bibnumber	NUMBER	

\bibtype	TYPE	See the BibT <sub>E</sub> X documentation for it's use. This is <i>not</i> related
		to the type of entry that is used for deciding on the layout.
\biburl	URL	Location on the internet.
\chapter	CHAPTER	the chapter number, if this entry is referring to a smaller sec-
		tion of a publication. It might actually be a part number or a
		(sub)section number. The field \bibtype (above) differentiates
		between these.
\city	CITY	city of publication.
\comment	COMMENT	just text.
\country	COUNTRY	country of publication.
\crossref	CROSSREF	A cross-reference to another bibliographic entry. It will insert a
		citation to that entry, forcing it to be typeset as well.
\day	DAY	Date of publication (for a patent)
\dayfiled	DAYFILED	Filing date for a patent
\doi	DOI	Document Object Identifier
\eprint	EPRINT	E-print information
\edition	EDITION	The edition.
\howpublished	HOWPUBLISHED	
\isbn	ISNB	isbn number (for books)
\issn	ISSN	issn number (for journals)
\issue	ISSUE	issue number (for journals)
\journal	JOURNAL	The journal's name.
\keyword	KEYWORD	just text (for use in indices).
\keywords	KEYWORDS	just text (for use in indices).
\lang	LANGUAGE	The language of the current bibliographic record (ignored at the
		moment)
\month	MONTH	Month of publication
\monthfiled	MONTHFILED	Filing month for a patent
\names	NAMES	just text (for use in indices).
$\n$	NATIONALITY	Nationality information for a patent
\note	NOTE	just text (this is the 'standard' BibTEX commentary field).
\notes	NOTES	just text.
$\operatorname{\colored}$	ORGANIZATION	Like institute, but for e.g. companies.
\pages	PAGES	Either the number of pages, or the page range for a partial publi-
		cation. The 't' key to startpublication will decide automatically
		what is meant.
\pubname	INSTITUTION,	Publisher or institution name.
	PUBLISHER,	
	SCHOOL	
\pubyear	YEAR	Year of publication. Within this command, the BibTEX bst files
		will sometimes insert the command \maybeyear, which is needed
		to make sure that the bbl file stay flexible enough to allow all
		styles of formatting.
\revision	REVISION	Release version
\series	SERIES	Possible book series information.
\size	SIZE	Size in KB of a PDF file (this came from the NTG Maps
		database)
\thekey	KEY	See the BibT <sub>E</sub> X documentation for it's use. This is <i>not</i> related
		to the key used for citing this entry.
\title	TITLE,	The title of a book.
	BOOKTITLE	
\volume	VOLUME	Volume number for multi-part books or journals.
$\y$ earfiled	YEARFILED	Filing year for a patent

Adding in one of your own fields is reasonably simple:

```
\newbibfield[mycommand]
```

This will define \mycommand for use within a publication (plus \bib@mycommand, it's internal form) as well as the command \insertmycommand that can be used within \setuppublicationlayout to fetch the supplied value (see below).

#### 6 Defining a publication type layout

Publication style files of course take care of setting defaults for the commands as explained earlier, but the largest part of a such a publication style is concerned with specifying layouts for various types of publications.

The command that does the work is \setuppublicationlayout:

```
\setuppublicationlayout [..., ...] {.2.}

1 article book booklet conference electronic inbook incollection inproceedings manual mastersthesis misc patent periodical phdthesis proceedings standard techreport unpublished

2 TEXT
```

The first argument that is a publication (BibTeX entry) type, and all publications that have this type given as argument to the 't' key of \startpublication will be typeset by executing the commands that appear in the group following the command.

For example, here is a possible way to typeset an article: from bibl-apa:

```
\setuppublicationlayout[article]{%
  \insertartauthors{}{ }{\insertthekey{}{ }}{}\%
  \insertpubyear{(}{). }{\unskip.}%
  \insertarttitle{\bgroup }{\egroup. }{}\%
  \insertjournal{\bgroup \it}{\egroup}
    {\insertcrossref{In }{}}}\%
  \insertvolume
    {, }
    {\insertissue{(}{)}{}\insertpages{:}{.}}{.}}
    {\insertpages{, pages }{.}}\%
  \insertnote{ }{.}}\%
  \insertcomment{}{.}}\%
}
```

For every command in the long list given in the previous paragraph, there is a corresponding \insertxxx command. (As usual, \author etc. are special: they have a macro called \insertxxxs instead). All of these \insertxxx macros use the same logic:

```
\insertartauthors{<before>}{<after>}{<not found>}
```

Sounds easy? It is! But it is also often tedious: database entries can be tricky things: some without issue numbers, others without page numbers, some even without authors. So, you often need to nest rather a lot of commands in the <not found> section of the 'upper' command, and \unskip and \ignorespaces are good friends as well.

#### Bibliographies

Incidentally, the distributed bibl-xxx files define layouts for the 'standard' publication types that are defined in the example bibliography that comes with BibTEX. The list of possbile types is in no way limited to that list, but it provides a reasonable starting point.

## 7 References

[1] Taco Hoekwater ConTeXt Publication Module, The user documententation. 12p. In case you didn't know: it's the document you are reading now.