

title : Module Documentation

subtitle: Bibliographies

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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 BibTEXand ConTEXt. This manual documents version 2006.08.08.

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 and \nocite 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.

```
\setuppublications [..,.^*_{=}.,..]
                    = ams <u>apa</u> apa-de apa-fr aps num num-fr ssa
   alternative
   refcommand
                    = author authornum authoryear <u>authoryears</u> key num serial page
                       type year data doi url
                       cite bbl
   sorttype
                    = all cite
   criterium
   numbering
                    = yes \underline{no} short bib
   autohang
                      yes
                            no
   monthconversion = COMMAND
```

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 sorttype the default option for \cite

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'.

3

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 BibTEX database as a label. Anything else turns

labelling off.

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'.

monthconversion The presentation form of any month field, if it is entered in the database as a

numeric value. The default is to typeset the number without any conversion

## 2.2 How the entries are formatted: \setuppublicationlist

```
\setuppublicationlist [..,.^*_{=}.,..]
                         = NUMBER
   totalnumber
   samplesize
                         = TEXT
   title
                         = COMMAND
   criterium
                         = SECTION local previous current all
   pagenumber
                            yes <u>no</u>
   artauthor
                            \normalauthor \normalshortauthor \invertedauthor
                            \invertedshortauthor
   author
                            \normalauthor \normalshortauthor \invertedauthor
                            \invertedshortauthor
   editor
                         = \normalauthor \normalshortauthor \invertedauthor
                            \invertedshortauthor
                         = TEXT
   namesep
                         = TEXT
   lastnamesep
   finalnamesep
                            TEXT
   {\tt firstnamesep}
                            TEXT
   juniorsep
                            TEXT
   vonsep
                            TEXT
   surnamesep
                         = NUMBER
   authoretallimit
   authoretaltext
                         =
                            TEXT
   authoretaldisplay
                         =
                            NUMBER
   authorcommand
                            \...#1#2#3
                         = NUMBER
   artauthoretallimit
   artauthoretaltext
                            TEXT
   artauthoretaldisplay =
                            NUMBER
                            \...#1#2#3
   artauthorcommand
   editoretallimit
                         = NUMBER
   editoretaltext
                            TEXT
                         =
   editoretaldisplay
                            NUMBER
   editorcommand
                            \...#1#2#3
   inherits from \setuplist
```

The list of publications at the end of the article is comparable with a sequence of normal ConTEXt 'list items' that behaves much like the list that defines the table of contents. In previous versions, it was in fact implemented as a 'normal' ConTEXt list, but this is no longer the true.

The module defines a set of extra options. These option names are static, they do *not* change to follow the selected ConTEXt 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)

A third option can be used to overrule the use of \title as heading for \completepublications

title The sectioning command.

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.

author command to typeset one author in the publication list.

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

editor command to typeset one editor in the publication list.

namesep the separation between consecutive names (either editors, authors or artau-

thors).

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.

authoretallimit Number of authors needed to trigger 'et al.' handling.

authoretaltext Text to show at the end of an abbreviated list.

authoretaldisplay Number of authors to actually display in an abbreviated list. Number of authors needed to trigger 'et al.' handling.

artauthoretaltext Text to show at the end of an abbreviated list.

artauthoretaldisplay Number of authors to actually display in an abbreviated list.

editoretallimit Number of editors needed to trigger 'et al.' handling.

Text to show at the end of an abbreviated list.

editoretaldisplay authorcommand artauthorcommand editorcommand editorcommand A three-argument macro to typeset the list of authors.

A three-argument macro to typeset the list of authors.

A three-argument macro to typeset the list of authors.

The commands after 'author' 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
\text{Taco von Hoekwater jr}
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 'apa' 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}}%

5

```
#3%
\bibdoif{#5}{\bibalternative{surnamesep}#5\unskip}}
```

but commands can be a lot simpler, like this:

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

The three-argument macro after 'authorcommand' etc. can be used to overrule the typesetting of the list of authors (normally done by the internal macro \dospecialbibinsert). This is mostly a hook for duplicated author lists in the publication list, that can be handled like so:

```
\def\oldlist{}
\def\AbbreviateAuthors#1#2#3%
   {\xdef\newlist{#3}%
   \ifx\oldlist\newlist \hbox to 2em{\hss---\hss}%
   \else \dospecialbibinsert{#1}{#2}{#3}\fi
   \global\let\oldlist\newlist }
\setuppublicationlist
   [artauthorcommand=\AbbreviateAuthors]
```

The first argument is a list type 'author', 'artauthor', or 'editor', the second argument is the number of items that should be typeset, and the third argument is a macro containing the commalist of persons, in a form suitable for \invertedauthor and friends.

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'
```

numbercommand 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 authoryear authoryears key serial page short type data doi url num
   andtext
                  TEXT
   otherstext
   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)

#### **Bibliographies**

pubsep separator between publication references in a \cite command.

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

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 BibTFX: \setupbibtex

BibTeX bibliographic databases are converted into .bbl files, and the generated file is just a more TeX-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 BibTFX 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 alphabetically on title and then on author and year, and 'short' (cont-ab.bst) sorts on the short key that is generated by BibTFX.

Starting with version 2006.08.08, the module registers BibTEX as a program to be run by texexec, so you no longer need to run BibTEX by hand.

Still, 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.

## 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 ConT<sub>E</sub>Xt 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]).

## 2.6 Legacy database support

Old BibTEX databases tend to contain LATEX-specific commands and, especially, command—definitions. To make it easier to handle these databases, a support module that defines a simplified version of LATEX's \newcommand is shipped alongside the bib module. You can load this support code by adding

\usemodule[bibltx]

to your document preamble.

#### 3 Citations

Citations are normally handled through the \cite command.

\cite has two basic appearances:

## 3.1 Default and explicit citations

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

OPTIONAL

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

2 REFERENCE
```

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 ConT<sub>E</sub>Xt 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')
         [http://dx.doi.org/]
                                                           (from 'd')
doi
         [me]
                                                           (from 'k')
key
serial
         [1]
                                                           (from 'n')
         [TH2006]
                                                           (from 's')
short
                                                           (from 't')
         [manual]
type
year
         (2006)
                                                           (from 'y')
         [http://contextgarden.net/Bibliography]
url
                                                          (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:

```
authoryears Hoekwater (2006) (from 'a' and 'y')
authoryears (Hoekwater, 2006) (from 'a' and 'y')
authornum Hoekwater [1] (from 'a' and 'num')

Taco Hoekwater ConT_EXt Publication Module, The user documententation. 14p. 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 [13] (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.

g

#### 3.3 Invisible citations

```
\nocite [...*,...]
* REFERENCE
```

This command registers the references in the argument list, but does not generate typeset material. It can be used to force certain entries from the database to appear in the typeset list of publications.

## 4 Placing the publication list

To typset the list of publications, 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 title.

The default for the publication list is to contain only the 'locally' referenced items, so if you want to use your own heading instead of the default one, you most likely want to call **\placepublications** with an explicit criterium, like so:

```
\placepublications[criterium=all]
```

The module uses the following defaults for the generated head:

```
\setupheadtext[en] [pubs=References]
\setupheadtext[n1] [pubs=Literatuur]
\setupheadtext[de] [pubs=Literatur]
\setupheadtext[it] [pubs=Bibliografia]
\setupheadtext[s1] [pubs=Literatura]
\setupheadtext[fr] [pubs=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.

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. These commands require three arguments, and there can be two extra optional arguments as well.

```
\artauthor[]{}[]{}{} 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[]{}[]{}{} AUTHOR The author of a standalone publication, like a monograph.

\editor[]{}[]{}{} EDITOR The editor of e.g. an edited volume.
```

The argument lists have this form:

```
\author[junior]{firstnames}[inits]{von}{surname}
```

and the meanings are as follows:

```
junior a designation of lineage, only used if confusion is possible (due to family members having the same name).

firstnames individual (given) name(s)
```

inits abbreviated form(s) of firstnames.

von any bits of the family name that are normally disregarded in sorting

surname reaminder of the family (last) name

# 5.1.2 Simple fields

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

\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	rissisfied person for a parent
\bibtype	TYPE	See the BibTeX documentation for it's use. This is not related
7-	1112	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 section 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
\edition	EDITION	The edition.
\eprint	EPRINT	E-print information
\howpublished	HOWPUBLISHED	1
\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
\month	MONTH	Month of publication
\monthfiled	MONTHFILED	Filing month for a patent
\names	NAMES	just text (for use in indices).
\nationality	NATIONALITY	Nationality information for a patent
\note	NOTE	just text (this is the 'standard' BibTEX commentary field).
\notes	NOTES	just text.
\organization	ORGANIZATION	Like institute, but for e.g. companies.
\pages	PAGES	Either the number of pages, or the page range for a partial publication. 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

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styles of formatting.

#### **Bibliographies**

\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 BibTEX documentation for it's use. This is <i>not</i> related to the key used for citing this entry.
\title	TITLE, BOOKTITLE	The title of a book.
\volume \yearfiled	VOLUME YEARFILED	Volume number for multi-part books or journals. Filing year for a patent

When the \lang field's content is a full word instead of a two-letter code, correct processing depends on an auxiliary command \setbiblanguage, to be used like this:

#### \setbiblanguage{English}{en}

The first argument is a literal \lambda argument, the second argument has to be a two-letter language abbreviation understood by ConTeXt.

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 [..., 1...] {.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 }{.}{.}}%
\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.

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 ConT<sub>E</sub>Xt Publication Module, The user documententation. 14p. In case you didn't know: it's the document you are reading now.