1 Introduction

This module takes care of references to publications and the typesetting of publication lists, as well as providing an interface between BibTEXand ConTEXt.
This is a preliminary version, there might still be changes needed or wanted in the near future. In particular, there are some minor issues with the multi-lingual interface that still need to be solved.
The bibliographic subsystem consists of the main module `m-bib.tex`; a helper module (`m-list.tex`); four BibTEX styles (`cont-xx.bst`); and an example configuration file (`bibl-apa.tex`) that specifies formatting instructions for 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. Some optional 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:
   - an implicit BibTEX-generated BBL file (read at `starttext`)
   - one or more explicit BibTEX-generated BBL files
   - an included definition file in the preamble
   - included macros before `\starttext`

   All of 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 tend to 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 allows one to define all of these style options in one single file. Unlike LaTeX, his style includes the formatting of the items themselves.

2.1 Global settings: `\setuppublications`

The most important user-level command is `\setuppublications`. Most of the options to this command are set by the bibliography style, and should only be overridden with great care, but a few of them are of immediate interest to the user. The command should be given before `\starttext`, and it sets some global information about the bibliographic references used in the document. ConTeXt needs this information in order to function correctly.

```
\setuppublications[..,..=..,..]

autohang        yes no
numbering       yes no short bib
criterium       all cite
sorttype        bbl cite
alternative     text apa
refcommand      author authoryear authoryears key number num page short type year data
```

alternative — This gives the name of a bibliography style
Currently, there is only one style, which is APA-like, and that style is therefore also the default.

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 BibTeX database as a label. Anything else turns labelling off.
The default for apa is 'no'

numbercommand — A macro that can be used to typeset the label is numbering is turned on. The default behaviour is to typeset the label as-is, flush left.

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'.

refcommand — the default option for `\cite`

Since most of the options should be set by a bibliography style, the specification of 'alternative' implies that all other arguments in the same command will be ignored. If you want to make minor changes to a bibliography style, do it in two separate commands, like this:

```
\setuppublications[alternative=apa]
\setuppublications[refcommand=author]
```

2.2 How the entries are formatted: \setuppublicationlist

```
\setuppublicationlist[..,..=..,..]

totalnumber     text
samplesize      text
editor          \invertedauthor \invertedshortauthor \normalshortauthor \normalauthor
author          \invertedauthor \invertedshortauthor \normalshortauthor \normalauthor
artauthor       \invertedauthor \invertedshortauthor \normalshortauthor \normalauthor
namesep         text
lastnamesep     text
firstnamesep    text
juniorsep       text
vonsep          text
surnamesep      text
..=..           see \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 few new options. These options are static, they do *not* change to follow the selected context interface.
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)

All 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.

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 reference, here is the definition of `\normalauthor`,

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

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 (currently) have the same page number: the number of the page on which `\placepublications` was called.
criterium	Always set to ‘all’. You need this! If you want partial lists, set ‘criterium’ to ‘used’, and ‘sorttype’ to ‘cite’. This combination will reset itself after each call to `\placepublications`

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 (only if autohang is ‘yes’)
distance	Set to 0pt (only if autohang is ‘yes’)
numbercommand	The 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 sub-options, as could be seen above in the setting of ‘refcommand’. And even the options have options:

```
\setupcite[..,...,..][..,..=..,..]

...           author authoryear authoryears key number num page short type year data
pubsep        text
lastpubsep    text
inbetween     text
left          text
right         text
compress      yes no
```

Here are the possible keywords:

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. The default is 'yes'

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`

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(s)
sort        no author title short
```

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 alphabetically on title and then on author and year, and 'short' (`cont-ab.bst`) sorts on the short key that is generated by BibTEX.

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(s)
```

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 three basic appearances:

`\cite[keys]`	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. 'keys' is a list of one of more publication IDs.
`\cite[option][keys]`	The long form, which allows you to manually select the style you want. See below for the list of valid 'option's.
`\cite{keys}`	For compatibility (with existing LATEX .bib databases). Please don't use this form in new documents or databases.

3.1 Cite options

Right now, the interesting bits are the keys for the argument of `\startpublication`
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, but here is an example:

```
\startpublication[k=me,
                  t=article,
                  a=Hoekwater,
                  y=1999,
                  s=TH99,
                  n=1]
...
\stoppublication
```

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')
key	[me]	(from 'k')
number	[1]	(from 'n')
short	[TH99]	(from 's')
type	[article]	(from 't')
year	(1999)	(from 'y')

Keep in mind that 'n' is a database sequence number, and not necesarily 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 (1999)	(from 'a' and 'y')
authoryears	(Hoekwater, 1999)	(from 'a' and 'y')
data	Hoekwater, T. (To appear). ConTEXt Publication Module, The user documententation. *MAPS*, pages 66–76. In case you didn't know: it's the article you are reading now.	The data content of the entry

And the last one is a page reference to the *first* place where the entry was cited. This is not always the page number in the list of publications: if there was a `\cite[data]` somewhere in the document, that page number will be the number used (as you can see from the example).

page [7] (a page reference)

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][pubs=References]
\setupheadtext[nl][pubs=Literatuur]
\setupheadtext[du][pubs=Literatur]
```

These 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[k=,
                  t=,
                  a=,
                  y=,
                  s=,
                  n=]
...
\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.
Each entry becomes one internal TEX command.

`\startpublication[..,..=..,..]`

k	*text*
a	*text*
y	*text*
s	*text*
t	*text*
n	*text*

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

```
\startpublication[k=me,
                  t=article,
                  a=Hoekwater,
                  y=1999,
                  s=TH99,
```

```
                  n=1]
\artauthor[]{Taco}[T.]{}{Hoekwater}
\arttitle{\CONTEXT\ Publication Module, The user documententation}
\journal{MAPS}
\pubyear{To appear}
\note{In case you didn't know: it's the article you are reading now}
\pages{66--76}
\stoppublication
```

5.1 Defining a publication

Here is the full list of commands that can appear between `\startpublication` and `\stoppublication`. All top-level commands within such a block should be one of the following (if you use other commands, they might be typeset at the beginning of your document or something similar).
Order within an entry is irrelevant, except for the relative order of the three commands that might appear more than once: `\artauthor`, `\author` and `\editor`.
Here is the full list of commands that can be used. 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:

`\abstract#1`	just text.
`\annotate#1`	just text.
`\artauthor[#1]#2[#3]#4#5`	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.
`\arttitle#1`	The title of such a partial publication.
`\author[#1]#2[#3]#4#5`	The author of a standalone publication, like a monograph.
`\chapter#1`	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, but the BibTEX field happens to be called `CHAPTER`. The field `\type` (below) differentiates between these.
`\city#1`	city of publication.
`\comment#1`	just text.
`\country#1`	country of publication.
`\crossref#1`	A cross-reference to another bibliographic entry. It will insert a citation to that entry, forcing it to be typeset as well.
`\edition#1`	The edition.
`\editor[#1]#2[#3]#4#5`	The editor of e.g. an edited volume.
`\institute#1`	The institute at which the publication what published.
`\isbn#1`	isbn number (for books)
`\issn#1`	issn number (for journals)
`\issue#1`	issue number (for journals)
`\journal#1`	The journal's name.
`\keyword#1`	just text (for use in indices).
`\keywords#1`	just text (for use in indices).
`\month#1`	month of publication
`\names#1`	just text (for use in indices).
`\note#1`	just text (this is the 'standard' BibTEX commentary field).
`\notes#1`	just text.

`\organization#1`	Like institute, but for e.g. companies.
`\pages#1`	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#1`	Publisher's name.
`\pubyear#1`	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.
`\series#1`	Possible book series information.
`\size#1`	Size in KB of a PDF file (this came from the NTG Maps database)
`\thekey#1`	BibTEX's 'KEY' field. See the BibTEX documentation for it's use. This is *not* related to the key used for citing this entry.
`\title#1`	The title of a book.
`\type#1`	BibTEX's 'TYPE' field. See the BibTEX documentation for it's use. This is *not* related to the type of entry that is used for deciding on the layout.
`\volume#1`	Volume number for multi-part books or journals.

Rather a large list, this is caused by the desire to support as many existing BibTEX databases as possible.
As you can see, almost all commands have precisely one argument. The only exceptions are the three commands that deal ith names: `\artauthor`, `\author` and `\editor`. At the moment, these three commands require 5 arguments (of which two look like they are optional. They are *not*!)
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`. It has an option argument that is a `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 reference, here is one of the commands 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.
There is nothing special about the type name you give in the argument, except that every `\startpublication` that does not have a 't' key is assumed to be of type 'article', and undefined 't' values imply that the data is completely ignored.
`bibl-apa` defines layouts for the 'standard' publication types that are defined in the example bibliography that comes with BibTEX.