B

A LaTeX

V

Bib

Ger Neugeb

Abstract

BibTeX
in LaTeX
BibTeX Bib is Bib
allo LaTeX
– LaTeX. Bib include
and LaTeX
selecting

This BIB V

BIB is
the GNU as
v

BIB is
RANTY;
F GNU for
details.

Y GNU along
do COPYING.
Mass

Gerd
Im
64521

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E-Mail: gene@gerd-neugebauer.de

Contents

1.

The BIB
is

1.1.

BI TEX Lam94, P , P]
in ATEX Lam94] I TEX
has
co I TEX.

- inserting
- editing
- using
- sorting
- extraction

Since I TEX
to

Bi TEX is ATEX
and
of EX

bib is I TEX BibLATEX

bib is I TEX
act

bibindex/biblo is
BI TEX
so

bibso is I TEX

bib is I TEX
file ATEX

lo are
a I TEX ATEX
BI TEX

bibto is
to
tasks.

bibview is LaTeX
are LaTeX

JabRef is LaTeX
platform

BibCa is
a

xbibtex/bibp are
running
fields LaTeX LaTeX

bibview is
in LaTeX

tkbibtex is LaTeX
ing.

bib Editor LaTeX

qbibman is BibTeX as
library

Ba an LaTeX

BibTeX-Mo is
BibTeX LaTeX-Mo
for

btOOL is LaTeX
b

This
I
short GMS94,

Most
are
single

Still BibTeX tries
to

1.2.

BIB has
man
options.
resource
determining BIB .

When BIB has
`bibtool`[1]. BIB from
preter.

```
bibtool
```

No BIB will
BI TEX [2] The
that
the

Usually BIB in
input
name

```
bibtool file.bib
```

The
`file.bib` is

No BIB w
case BIB .
BI TEX

1.2.1.

BI TEX `-s`.
sorted
BIB will

```
bibtool file1.bib
```

With `-S` the ASCI order.

```
bibtool file1.bib
```

[1] Ma
[2] W

If I TEX
should

```
bibtool –sort.format="%N(author)"
```

This
that so are
line

1.2.2.

Once I TEX
reference
easy
it

One
Alternativ
authors
suc BIB has
desired

F I TEX [3] Supp
is sample.bib.

```
@ {
   a
   t
   j
   y
   v
   n
   p
   m
   n
}
```

First,
of
follo

```
bibtool sample.bib
```

After
output sample1.bib:

[3] Shamelessly I TEX xamples.bib file.

```
@        {
  a
  t
  j
  y
  v
  n
  p
  m
  n
}
```

Y
the
to

```
bibtool    sample.bib
```

The aamport.la:gnats.
first
the

Another
follo [4]

```
bibtool    %n(author):%2d(year)
```

The Aamport:86.
sample
generation A.10 is

1.2.3.

Bib can I TEX
w I TEX
braces
the Bib can

```
bibtool  –  'rewrite.rule={"^\"\([^#]*\)\"$"                out.bib
```

Since
w
bash,...)
rewrite
in

[4] Note
quoted

The
closed
then

The
the ^).
c
only

Since
giv
pattern \).

Next \(. \).
sub-string
is

No
purp [.].
sp
Th #)

The *)
of

W
whic
lik

```
a
```

Suc
p .)
w

```
a
```

But
replacemen \1 is
but
of

Th
sometimes

1.2.4.

Bib can
Bib analyzes .aux file

names I TEX I TEX
Instead .aux file -x.

```
bibtool do -o do
```

The -o follo
This
written

1.2.5.

Bib can
can [5] As
con

```
bibtool tex -o some.bib
```

This tex in
option -o follo
of

Next
purp [6]

```
bibtool sele {"tex"} al -o some.bib
```

Note
page 34).

Finally
tain *sele*
instruction:

```
bibtool sele {title $key } al -o some.bib
```

This tex in
b

After
short

```
bibtool sele {$key } al -o some.bib
```

[5] Those
ration Bib —whic

[6] Note
select

As
This

```
bibtool  sele {@b } al  -o some.bib
```

A

Note Usually
in LaTeX
follo

```
bibtool  sele {b } -c al  -o some.bib
```

1.2.6.

Sometimes LaTeX
p LaTeX
incompatible ASCI as LaTeX. Bib to
tric

```
bibtool  iso2tex -i iso.bib -o ascii.bib
```

1.2.7.

Bi TEX
en
those

This

```
so {{%1.#s(crossref }$k }
so
so
```

The

`%1.#s(crossref)`
This
dition
coun `#s)` `crossref` and
with , ∞] `1.`).

Th

`%1.#s(crossref)a`
If `a` is

`{%1.#s(crossref)a#z}`
If #)
considered. z whic
in

Th a if
or z otherwise.

`{%1.#s(crossref)a#z}$key`
Finally $key)

The
fields

1.2.8.

Sometimes I TEX
b I TEX
ha
suc delete.field as

The BIB with
the -r.

```
delete.field { libno }
```

If delete.field sev
All

Another

```
bibtool ke _bibtex -o r
```

This k _bibtex.rsc whic
should I TEX.

And ATEX
command

```
bibtool ke _biblatex -o r
```

1.2.9. Bib fo ATEX

BIB con I TEX ATEX.
definitions biblatex.rsc.
command

```
bibtool biblatex -i in.bib -o out.bib
```

Details C.2.

1.3. Bib with

Bib can LaTeX
data Bib reads LaTeX
form
information

In Bib can
mations
easy Bib to
from LaTeX

Curren Bib con
can

I Bib a
this
do

A
exp
BibTcl Bib .

1.4. Bib ,

Usually Bib can
Bib via
It

http://mirrors.ctan.org/biblio/bibtex/utils/bibtool

A
http://pgp.mit.edu/. gene@gerd-neugebauer.de.

Bib is github[7].
sources

https://github.com/ge-ne/bibtool

I Bib .
and
The

http://www.gerd-neugebauer.de/software/TeX/BibTool/

[7] It

In Bib and
of

If Bib y
m gene@gerd-neugebauer.de.
in

- The Bib y
- Y
- The
tion
- The
for
- A *smal* Bi TEX
- The Bib making
p
- A

I
problems
rep

On
ab
had

Oh, Bib .
am

1.5. Bib

As Bib is
F
not COPYING for

If
the

- Pro
material
- Pro Bib .
files

- W
  ably GNU or
  GNU

A.

This
b BIB can
y *instal* if

A.1.

Be
command
to
lik

F
argumen ') \,
`$`, `&`, `!`, `#`.

Instead
to
the

A.2.

BIB can
mands BIB
T is `bibtool` (ma
with
can BIB in
a
the
can

```
bibtool
```

No BIB is BIB reads
This I TEX
when BIB is
c

This
argumen BIB . -h as

```
bibtool
```

This
line

The
command -r.

```
bibtool r _file
```

In
read
command BIB tries
v BIBTOOLRSC is
resource
All
set
.bibtoolrsc)
v HOME)

The I TEX
section A.4). .rsc is
is BIBTOOL.
is
resource resource.sea .

```
resource.sea path
```

When
T -R
can

```
bibtool
```

No
resource .bibto) my_rsc.

The BIB uses *my_rsc*:

```
bibtool -r my_rsc -i sample
```

If
the -R *b* the

```
bibtool -R my_rsc -i sample
```

If `-R` argumen
ev

```
bibtool -r my_rsc -R    sample
```

Additionally
in
one
in BIB [1].

As
cations:

```
bibtool -r my_rsc -i sample -R
```

```
bibtool -i sample -r my_rsc -R
```

No
a

```
name = {value}
```

name is I TEX
name can

"

Resource
is =).
syn
resource
kind:

- A
- A
  bidden
- A
  taining
  pairs.
- A {}).
  theses

[1] This

Y
Resource
v

- Bo on and off. on, t, true, and y are ignored. true and T are as off.
- Numeric
- String

Usually % and
act
to

No
files

```
resource {additional/resource/file}
```

Th
-r describ
op

One p resource.
is
c
can
in

T p resource.
see

```
p
```

Finally
the -- The
command

```
bibtool r _c
```

This
terpart. p instruction
command

```
bibtool print{hel _world}
```

A.3.

Bib as
used Bib in

In Bib returns 0 if
co 0.

Summa

Option		
-h		Sho
-R		Immediately default
	p {*message*}	W *message*.
-r file	*resource* =	Immediately resource *file*.
	resource.sea	List
-- rsc		Ev *rsc*.

A.4.

An
w -i is
restriction
a

```
bibtool input_file
```

The input can

```
input {input_file}
```

Input
standard

Dep Bib there
for LaTeX Bib uses
extensions
additional
nativ Bib searc

The
extension .bib is
giv

w bibtex.sea can
sp

```
bibtex.sea {directo }
```

The
as
BIBINPUTS. I TEX
path. bibtex.sea .
c
of

T
b bibtex.env.name o
en BIBINPUTS.

```
bibtex.env.name {ENVIRONMENT_V }
```

The env.sepa is
resource bibtex.sea and bibtex.env.name.

```
env.sepa {:}
```

The /).
c dir.file.sepa can

```
dir.file.sepa {\}
```

Note that env.sepa and dir.file.sepa are
to
at env.sepa is ; and
dir.file.sepa is \.

If I TEX
describ
probably EX
I
details.

Summa

Option		
	bibtex.env.name={*var*}	Use *env* to directories put)
	bibtex.sea ={*p* }	Use *p* to (input)
	dir.file.sepa ={*c*}	Use *c* to from
	env.sepa ={*c*}	Use *c* to a
`-i` *file*	*input*{*file*}	Add *file* to files.

A.5.

By
output `-o` as

```
bibtool  output_file
```

The output.file can

```
output.file  {output_file}
```

No

A
standard

The
status
W
are
pro
but

W `-q`.
toggles

```
bibtool
```

The on or off to quiet:

```
quiet
```

Status
the -v.

```
bibtool
```

The verb :

```
verb
```

Another
section A.14 on

Summa

Option			
-o file	*output.file* {*file*}	Direct	*file*.
-q	*quiet=on*	Suppress pressed.	
-v	*verb* =*on*	Enable of BIB .	

A.6.

The I TEX
prin I TEX
syn

This pa .
BIB exits
is off.

```
pa
```

Eac I TEX
an BIB stores
the
discarded pass.comments can
c

```
pass.comments
```

If
file.

The I TEX
fined BIB . new.entry
as

```
new.entry {Anthology}
```

This
defined. A as
en

```
new.entry {ANTHOLOGY}
```

Eac

When
stance
b p .
acter
database
to

a The

c The

i The

m The

n The

p The

$ The

S The

s The p determines
whether

The
desirable

```
p {pn}
```

The
options.
the

p This
whic
line.

p This
en

p This
and

p This
commen

p This
en

p This
tries

p This
tries [2] This

p This
fields off then
prin p
determines

p This
is
v on.

p This
This

p This
after LaTeX
migh off.

p This TAB c
inden
If
defaults on.

p This
forced off whic
no
alignmen

supp This
mal

The
lo

p

[2] This

Next
title.

```
                    p
@Unpublished{
  author
                    and
  title
                    exceeds
  note
}
                                                    p
```

The
the new.field.t .
the
only

```
    new.field.t   { autho                }
```

This
a

```
    new.field.t   { OPT                  }
```

String I TEX. BIB normalizes
b
other
i.e.

The symb .
`lower`, `upper`, `cased`.

```
    symb
```

The
Th
ab
t

The
(see A.10).
times I TEX
not
is p .
Y

```
p
```

If
the
enced p .
recognize

Summa

Option		
	new.entry {*typ* }	Define *typ* .
	new.field.t {*typ* }	Define *typ* .
	pa =*on*	F encoun
	pass.comments=*on*	Do the
	p =*on*	Do ing.
	p =*n*	Align *n*.
	p =*n*	Align *n*.
	p =*n*	Align = of *n*.
	p =*n*	Align = of *n*.
	p =*on*	Put line
	p =*n*	Inden *n*.
	p =*n*	Break *n*.
	p =*n*	Num
	p =*on*	Use TAB c spaces.
	p =*off*	F
	supp =*on*	Suppress records.
	symb =*typ*	T lo *typ* :

A.7.

The
reference -s and -S as

```
bibtool
```

```
bibtool
```

The ASCI order
lo ASCI order.
ac so and so resp

```
so {on}
so {on}
```

The so determines
so determines ASCI
order
otherwise.

Alternativ
ification
describ A.10 in

The so .
tiv

```
so {%N(autho }
so {%N(edito }
```

Those

```
so {%N(autho }
```

This
giv
k

Let 8. so instruc-
tions so giv
w

Note that ASCI order
the

Usually
v p can
cased
the so to
k

```
p {on}
so {on}
```

Beside
default. so can

```
so {off}
```

An 1.2.1 on 7.

Summa

Option			
-S			Enable der.
-s	*so*		Enable
	so	*=on*	Use sorting.
	so	{*sp* }	Add *sp* to sp
	so	*=off*	T
	so	*=on*	Rev

A.8.

Bib mak
regular
regular

A regex-0.12/regex.texi
con Bib distribution.
preferable.
sions.

Note

Ordina matc
An
letters

F *ab* matc *ab* .

The (.)

F *a.c* matc *ab* but
matc *abb* .

The (*)
pression.

F *ab*c* matc
follo *ac* and
abbb . *ab* .

The (+)
pression,
empt
an

F *ab+c* matc
follo *abbb* .
not *ac*.

The (?)
regular
question

F *ab?c* matc
follo *ab* .
matc *abb* .

The (\|)
a

Note

F *ab* \ *def* matc *ab* and
def.

P (\(\))
paren

Note

F *a*\(*b*\ *d*)*c* matc *ab* and *adc*.

The ($)
anc
expression

F *ab $* matc *aaaab* but
matc *ab* .

The (^)
to
of
con
describ

F ^*ab* matc *ab* but matc *aaaab* .

The (`[]`) list ^) Otherwise

F *[ab* matc *a*, *b*, *c*. *d*.

The *[^ab* matc a,

The (\) sp is

If *d* then d^{th} matc

F *(an)\1as* matc *ananas* since first *an*.

If `n` then newline.

If `t` then single `TAB` c

A.9.

A.9.1. `aux` Files

Bib includes I TEX accomplished `aux` file `aux` file b ATEX. I TEX in `aux` file Since I TEX `aux` file input

T `aux` file `-x` can the `aux` file.

```
bibtool file.aux
```

Multiple with extract.file can

```
extract.file {file.aux}
```

A
ically p to off.
man

Note
tries. I TEX
resolv

One I TEX \nocite{*} is
LATEX
same BIB .

An 1.2.4 on 10.

A.9.2.

The
whic select.b
can
on.
Th
describ A.9.3.

The select.b is
for.
has

```
select.b {"some }
```

This some in
The
those
can

```
select.b {field1 . fieldn "string"}
```

T
the
with select.case.sensitive.
resources
is
expressions A.9.3).

During BIB ignores
certain
The select.b .
the

```
select.b {"{} []"}
```

As select.case.sensitive the select.b
no is
to

In select.b can
used
form select.b :

```
select.b {field_1 . field_n "string"}
```

Note Cross-references select.crossrefs is

A.9.3.

Another
b aux files.
is A.8.

The select allo
general

```
select {field_1 . field_n "regula _exp }
```

If
expression "." is

An
selects *field* whic
has *r* *_expr* .
regular

The $key, $type, @*typ* can
the 53 for
here.

Analogously
b select.non.

```
select.non {field_1 . field_n "regula _exp }
```

The select.case.sensitive can
is

```
select.case.sensitive {off}
```

Note
collected
selection
of select.case.sensitive is
used
sensitiv

A -X as

```
bibtool  r  _expr
```

The
select.fields. $key.
fields
spaces.

Th author and editor are
considered

```
select.fields  {"autho  }
```

Without select.fields the
len

```
bibtool  sele  {$key  _expr  }
```

Note select.case.sensitive and select.fields are
pressions
to
sensitiv

Finally extract.regex can

```
extract.regex  {regula _exp  }
```

This
k
v

Note Cross-references select.crossrefs is

A.9.4.

When
cross-references
and I TEX

The
select.crossrefs. `off` b
ignored.

The
referenced

```
select.crossrefs
```

A.9.5.

BI TEX
plished `crossref` field.

```
@    {
  b
  b
}
@       {
   a
   t
   c
}
```

Sometimes `crossref` and
ing
b expand.crossref. `off` b
cross-references

The
referenced

```
expand.crossref
```

Note BIB acts
means *not* in `crossref` field
the
title

A `crossref` field.
recursiv
The crossref.limit.

This
than
32.

```
crossref.limit
```

BibLaTeX Leh14]
are `crossref`.
exp
an

T BIB con
field
name
name

This crossref.map.
sym
This

```
crossref.map {source.t                                    }
```

The
issued

T
t

```
crossref.map {{source.t    1 source.t    2} source.field
{ta          1 ta          2 ta          3} ta          }
```

In
as

If
when
newly

Initially
they clea .
previously

```
clea              {}
```

BibLaTeX Leh14]
sp `@XData` can
b `xdata` whic
comma `@XData` en

```
@      {
  b
  b
}
@      {
  p
  a
}
@       {
   a
   t
   x
}
```

BIB supp
to crossref fields BIB can xdata fields.
can expand.xdata. off b
It

```
expand.xdata
```

Summa

Option		
	expand.crossref=*on*	Include crossref field.
	expand.xdata=*on*	Include xdata field.
-x	*extract.file*{*file*}	Extract aux file.
	extract.regex{*expr*}	Discouraged mand.
-X r	*select*{*sp* }	Select pression.
	select.b {*sp* }	Select string
	select.b {*sp* }	Select matc
	select.b {*chars*}	Define the
	select.case.sensitive=*off*	T
-c	*select.crossrefs*=*on*	T referenced
	select.fields{*fields*}	Determine -X.
	select.non{*sp* }	Select ular

A.10.

The
b
k
a
to
option `-f` in

```
bibtool    format
```

This
The k .

```
k          {fo    }
```

Some *format* ha
of
w I TEX

```
@
  a
            a
  t
            e
  .
}
@       {
   a
   t
   .
}
@    {
   e
   t
   .
}
@    {
   k
   n
}
```

sho If `key` is
editor
only fmt.name.title
separator default.k
is k).

T BIB to
command -- .
(remaining

```
@
@       {
@    {
@    {
```

long The
ting

If BIB is
argumen -- w

```
@
@       {
@    {
@    {
```

new.sho This sho but
is p and

If BIB is
argumen -- w

```
@
@       {
@    {
@    {
```

new.long This long but
obsoleted p and

If BIB is
argumen -- w

```
@
@       {
@    {
@    {
```

empt The
BI TEX
whic
giv

If BIB is
argumen -- w

```
@
@        {
@     {
@     {
```

In
matting
done -F as

```
  bibtool
```

Alternativ k can

```
    k
```

Usually
citations p is
resource off. on then
they
white-space I TEX)

```
@        {
    a
    t
    j
    y
    v
    n
    p
    m
    n
}
```

Ev p is on, BIB still
can p to on (see A.6).

When k is empt then
or
the k .
found
the
of k .
v upp , lo , digit.

generated	digit
`key`	
`key`	
`key`	
`key`	
`key`	

As
the A.11 w
Those
sp

p This
unc `off`.

p This
and
case `off`.

default.k The
`**key*`.

k The
disam upp , lo , digit.
letters,

k The
n `*`.

k The
macros `off`.

fmt.name.title The sho and long to
names :.

fmt.title.title The
default :.

fmt.name.name The
the LaTeX `and`) ..

fmt.inter.name The
when -.

fmt.name.p The
formatting ..

fmt.et.al The `and` parts
The `.ea`.

fmt.w The
considered
c

The sho can
A.11 as

```
{
  {
  #
  }
  {
  #
  #
  }
}
#
{
  #
  }
}
#
```

The A.11.

A.10.1.

Bib pro @Alias definitions
whoic
curren I TEX

The k .
in

```
k
```

The off.

Summa

Option			
	p =*off*	Do presen	
	p =*on*	Do ing.	
	default.k ={*key*}	Key	
	fmt.et.al={*e* }	String	
	fmt.inter.name={*s*}	String	
	fmt.name.name={*s*}	String	
	fmt.name.p ={*s*}	String	
	fmt.name.title={*s*}	String	
	fmt.title.title={*s*}	String	
	k ={*b* }	Kind k	
	k =*off*	T	
-f	*k* {*fmt*}	Set	*fmt.*
-F	*k* =*on*	T	
	k =*on*	T whic	`@Alias` en
	k ={*s*}	String n	

A.11.

A.11.1.

The
an

"

This I TEX.
no
that I TEX

F

```
Key
the_name.of-the-@uthor-is:
```

No
the
are [3]

```
Author
AuthorOrEditor
A
```

A.11.2.

The
with % c
Since LaTeX
sev

```
%N(author)
```

The % c N—whic
formatting
example author according
names N).

The

%*sign* (*field*)

In *sign* is + or -. + means
upp - means
giv

pr and *p* are *letter*.
qualifier is
tionally #.
list:

p F *p* .
at *pr* names
and .

pr defaults *p* defaults

See A.11.10 for

Example

```
a
```

[3] W
the

With

```
%p(author)
%1p(author)
%-2p(author)
%+1p(author)
```

`n` F
In *pr* last
are `and` . *p* is *p*
c

pr defaults *p* defaults

This `p` format *p*
v `n` sp *len* v
sp A.11.10)

Example

```
a
```

With

```
%n(author)
%1n(author)
%-2n(author)
%+1n(author)
%.3n(author)
```

`N` F
In *pr* last
are `and` . *p* is *p*
c

pr defaults *p* defaults

This `p` format *p*
v `n` sp *len* v
sp A.11.10)

Example

```
a
```

With

```
%N(author)
%1N(author)
%-2N(author)
%+1N(author)
%.3N(author)
```

`d` F

The p th n pr digits—coun
righ `"june` formatted `%2d` results
58.

pr defaults
it

p defaults
use `%.2d` as

If
`%0d` can

P
ha
in

If
a `0` is

If `0` if
the
n `0`s

Example

```
p
```

With

```
%d(pages)
%1d(pages)
%4d(pages)
%-4d(pages)
%-5.2d(pages)
%.3d(pages)      fails
%+.3d(pages)
%0d(pages)       suc
```

`D` F
This `d` sp
cated.

Example

```
p
```

With

```
%D(pages)
%1D(pages)
%4D(pages)
%-4D(pages)
%-5.2D(pages)
%.3D(pages)      fails
%+.3D(pages)
%0D(pages)
```

`s` T
A *pr* c

pr defaults

Example

```
a
```

With

```
%s(author)
%8s(author)
%-8s(author)
%+8s(author)
%0s(author)    suc
```

`T` F
A *pr* w *pr* is
artificial *p* is *p* letters
are

New igno .

pr defaults *p* defaults

Example

```
t
```

With

```
%T(title)
%2T(title)
%2.1T(title)
%-T(title)
%+T(title)
```

The
T
ered

use fmt.w . +, -, <, =, >, *, / are

```
fmt.w "+-<=>*/"
```

Note fmt.w is
p

`t` F T no
A *pr* w *pr* is
artificial *p* is *p* letters
are

pr defaults *p* defaults

Example

```
t
```

With

```
%t(title)
%2t(title)
%2.1t(title)
%-t(title)
%+t(title)
```

`W` F
This T except

Example

```
t
```

With

```
%W(title)
%2W(title)
%2.1W(title)
%-W(title)
%+W(title)
```

`w` F
This t except

Example

```
t
```

With

```
%w(title)
%2w(title)
%2.1w(title)
%-w(title)
%+w(title)
```

`#p` Coun

If *sign* is *sign* is `+` then
less *pr* or *p* then
it

The `and` ,
authors,

If *sign* is `-` then
sign `-` acts

If ∞.

If *a* is `and` then
`%l.h#p` succeeds $l \leq a \leq h$.
`%-l.h#p` succeeds *l* or *a* .

pr and *p* b

Example

```
a
```

With

`%2#p(author)`	*suc*
`%4#p(author)`	*fails*
`%-4#p(author)`	*suc*
`%3.4#p(author)`	*suc*
`%-3.4#p(author)`	*fails*

`#n` Is `#p`.

`#N` Is `#p`.

`#s` Coun

If *sign* is *sign* is `+` then
less *pr* or *p* then
it

If *sign* is `-` then
sign `-` acts

If ∞.

pr and *p* b

If a is
`%l.h#s` succeeds $l \leq a \leq h$.
`%-l.h#s` succeeds l or a .

Example

```
t
```

With

`%#s(title)`	*suc*
`%13.13#s(title)`	*suc*
`%10.16#s(title)`	*suc*
`%-10.16#s(title)`	*fails*

`#w` Coun
w EXing

If *sign* is *sign* is + then
less *pr* or *p* then
it

If *sign* is - then
sign - acts

If ∞.

pr and *p* b

If a is
`%l.h#p` succeeds $l \leq a \leq h$.
`%-l.h#p` succeeds l or a .

Example

```
t
```

With

`%#w(title)`	*suc*
`%3.3#w(title)`	*suc*
`%1.6#w(title)`	*suc*
`%-1.6#w(title)`	*fails*

`#t` Is `#w`.

`#W` Coun
determined igno .
after EXing

If *sign* is *sign* is + then
less *pr* or *p* then
it

If *sign* is - then
sign - acts

If ∞.

pr and *p* b

If *a* is
ignored
`%l.h#p` succeeds $l \leq a \leq h$.
`%-l.h#p` succeeds *l* or *a* .

Example

```
t
```

With

`%#W(title)` *suc*
`%2.2#W(title)` *suc*
`%1.6#W(title)` *suc*
`%-1.6#W(title)` *fails*

`#T` Is `#W`.

If
example, `%t(title)`,

```
t
```

In `The-Whole-Title`.

The *(field)* selects
BIBTEX
fails

But
BIBTEX `crossref` is
en `crossref` field
the
the crossref.limit. `crossref` field
b

Usually BIBTEX
Nev

T crossref.limit to
this

A.11.3.

In
listed

`$key` This
none

`$sortkey` This
formed.

`$default.key` This default.k similarly fmt.name.title, fmt.title.title, fmt.name.name, fmt.inter.name, fmt.name.p , fmt.et.al can

`$source` This
If
then

`$type` This
`@` of I TEX `article`.

`@t` This
(ignoring

In `%s(@Article)` succeeds `Article` whereas `%s(@Book)` fails.

`$day` This
string
the BIB run
BIB .

On
In

`$month` This
string

`$mon` This
if

`$year` This
string

`$hour` This
string

`$minute` This
empt

`$second` This
empt

`$user` This `$USER` or
empt
con
a

`$hostname` This `$HOSTNAME`
or

A.11.4.

Conjunctions
simply
part

Supp I TEX `editor` and `year`.
conjunction

```
%-3n(editor)
```

If `editor` field `"E.D.` and `year` field `"1992"` then
the `itor:92`.

A.11.5.

Dep
This P -lik
as

(*field*) *then-p* `}` *else-p* `}`

If A.11.2 succeeds *then-p* is
ev *else-p* is
the

Let
`author` if

```
(author){%N(author)}{--no-author--}
```

A.11.6.

Alternativ `#`).

alternative$_1$ `#` *alternative*$_2$ `#` . `#` *alternative*$_n$

The
the
whole

An

The A.11.5 can

```
%N(author)
```

If
Otherwise

A.11.7.

An {})
dence

Coming
w
follo

```
{%N(author)
```

The # in

Another
a

```
{%0s(@book)
```

The %0s sp
adding
construct @book and @proceedings.
pseudo
form
only

A.11.8.

Certain
ignore
it
of
languages

The igno can
w
there

```
igno          {w    }
```

T
compiled
Afterw
This clea .
op
for

```
clea          {}
```

A.11.9. EX/LATEX

When ATEX
macro ATEX
tex.define can ATEX ATEX.
simplest

```
tex.define {macro=replacement      }
```

This
replacemen

In
LATEX's `\newcommand` the

```
tex.define {macro[a   ]=replacement      }
```

The
writing `#`n, n is

F

Note =)
un

Usually \).
another Kn]).
p ≥ 128)
appropriate EX

F `\TeX` to
`TeX`.

```
tex.define {\T          }
```

Without `The` w `book.`
nition `TeXbook.`

Supp
The [4]

```
tex.define {¨      }
```

With `\protect` macro
b

```
tex.define {\p             }
```

Some BIB (see
app C).

A.11.10.

Names BIB tries
them I TEX
comp

- The
case
F
- The
junior
F
- The
letters.
F
w
- The BIB kno
only
sen.,

Ev
More Lam94] P].

BIB pro
construct %p format
(see

[4] T

Bib uses [5] Initially
fined. %*l[*fmt.inter.name*].
name %*l[*fmt.inter.name*]%*1f[*fmt.inter.name*].

The %N and %n.
Th
name Bib issues

The new.fo can

```
new.fo {17="%f%v%l"}
```

This
is
used + or - and
a f, v, l, j.
argumen

Th

%*sign* .*numb* [*pr*][*mid*][*p*]

The f denotes l denotes v
denotes j denotes

If *sign* is + then *sign* is - then
translated
is * then

The *len* can
is *len* c *len* is
is ∞.
sp

The *numb* after
tak

If [*mid*] is
none

If [*pr*] is
empt

If [*p*] is
empt

No Cervantes
Saavedra, [6].
the

[5] The
[6] This

W

```
%1f[.][][.]%1v[.][][.]%3l[-]%1j
```

This
and `M.d.Cer-Saa`.

Note
k

A.11.11.

T
sp
generated:

1. If `bibkey` is
2. If
   the
3. If `article`)
   journal,
   b
   separated
4. If `proceedings`)
   the
   should
5. If
   the
6. Otherwise
   used.
   at

The
translated
with

The
string.

T

```
k                    =
k          =
k                       =
k             =
{
    %
  #
```

```
    %
    {
    {
  #
    %
    {
    {
    {
  #
    %
    {
    {
    {
  #
    %
    {
    {
    {
  #
    %   $t
    {
    #
    }
    {
  #
    %   $t
    %
  #
}
```

Since
use
they cond
statemen
the

The %0w(@book) are
struction
of %0w could
same

The {%4d(year) alw #)
failure
field

Summa

Option			
clea	{}	F	
new.fo	{*n*=*sp* }	Define	
igno	{*s*}	Add	
tex.define	{*macr* }	Expand	EX *macr* to *text.*
tex.define	{*macr* }	Expand	EX

A.12.

This

A.12.1.

Certain
F
imp
ev add.field is
this

```
add.field {field=value}
```

This *field* b *value* in
do
they

value can A.11.2 ab
“F 45.

Supp `time`.
time-stamp

```
add.field {time="June }
```

If
can 53).

```
add.field {time="%s($mon) }
```

If
this

```
add.field {time="%3s($mon) }
```

A.12.2.

Certain delete.field is
ation.

The *field*:

```
delete.field {field}
```

Sev

A.12.3.

The
b
k allo

In
the

```
k {field}
```

Sev k can
not

Note
the

Next

```
k {field if field_c = pattern"}
```

The `if.`
pseudo-field
is

As
y
illustrated

```
k {{field_1 . field_n}}
k {{field_1 . field_n} if field_c = pattern"}
```

The
In *)
name * is

```
k {*}
k {* field_c = pattern"}
```

The
an

The
satisfies

The k _bibtex.rsc and k _biblatex.rsc con k resources
declarations
Bı TEX ATEX

A.12.4.

Fields
that

The rename.field can
used

```
rename.field {old=new}
rename.field {old=new if field=pattern}
```

The *old* and *new* are
(unquoted)
output

In *field* is
section A.11.3).
against *p* . *p* is
The *p* matc *field*.
record

The rewrite.case.sensitive.

The
written

Note
w I TEX

Note
in

The rename.field.

The

```
rename.field {auto }
```

The `title` to `booktitle` for
t

```
rename.field {title }
```

A.12.5.

Field I TEX
data
as 1.2.3.

The rewrite.rule can
follo

```
rewrite.rule {field_1 .  field_n #  _text}
```

field$_1$. *field*$_n$ is
whic
to

```
rewrite.rule {pattern  _text}
```

Next
sign

p is
against
then
replacemen

r *_text* is
The \' \n' n^{th} matc
of *p* . *n* is
inserted.[7] Th

Other

\$ whic

\@ whic

If
delete.field is
text.

```
rewrite.rule {field  }
rewrite.rule {pattern}
```

More

```
rewrite.rule { time  {}$" }
```

[7] F
escaping

deletes
is ^{}$. ^ matc
of $ matc
field

This
the

```
rewrite.rule { "^{}$" }
```

Note
quote

```
rewrite.rule { "^\"\"$" }
```

The
tion A.11.2 on 45.
sp
follo
presen

```
rewrite.rule { time }
```

The .* matc
the
Th

Usually
matc
resource rewrite.case.sensitive whic on b
only

```
rewrite.case.sensitive
```

A
T rewrite.limit con
n rewrite.limit is
negativ
of rewrite.limit indicates
limitation

Next
c ␣'
b

- Empt
whic
w

```
rewrite.rule { "^\"␣*\"$" }
rewrite.rule { "^{␣*}$" }
```

The ^’
The
regular

- Ranges
(--).
deleted

```
rewrite.rule { pages }
```

- Field
ho
delimiter

```
rewrite.rule {title }
```

A.12.6.

Fields
a so .
The

```
so { entry 1 # 2 # }
```

entry is book. *fields*
names author. *field1* should *field2* etc.
whic
order

Another
kind
b

*.

An
a

Consider

```
so      {*                    }
so      {misc                                  }
```

This
misc

The so _fld.rsc con

Summa

Option		
	add.field{*field=value*}	Add
	delete.field{*field*}	Delete
	rename.field{*old=new*}	Rename
	rename.field{*old=new* *tern*}	Rename condition.
	rewrite.case.sensitive=off	T rewriting.
	rewrite.rule{*fields#p* }	Replace replacemen
	so ={*entry=f#.* }	Sp en

A.13.

Seman
parsing.

A.13.1.

When
doubled
problems
double

The
sort
of
comparing so (see A.7).
The
doubles.

It
double

as
presen LaTeX BibTeX will
remo pass.comments is off,

Sometimes
commen
resource p . off then
completely

The
to p whic
ending @ since

The check.double.delete can
F

```
check.double.delete
```

The check.double can
is

```
check.double
```

Chec -d:

```
bibtool
```

A.13.2.

The A.8)
A.12.5)
resource check.rule is check.rule is rewrite.rule.

```
check.rule { field }
```

Again *field* and *message* is
sign

Eac
where *field* (if *p* matc
the *message* is
no

message is rewrite.rule,
com A.12.5 are

Usually
matc

resource check.case.sensitive whic
only A.12.5.

```
check.case.sensitive
```

Consider
from

```
check.rule { year    \"{]1[89][0-9][0-9][\"}]$" }
check.rule { year    \"{][0-9][0-9][\"}]$" }
check.rule { year     \@ \$:                                    }
```

The
digits. [8] The
at
whole

The
message
then

Otherwise
empt
the \@ is
b \$ b

Summa

Option		
	check.case.sensitive=off	P
`-d`	*check.double=on*	Find sort
	check.double.delete=on	Delete them.
	check.rule{field#p }	If the

A.14.

Strings I TEX
bases. macro.file is
macros

[8] In
But

```
macro.file {macro/file/name}
```

Note
deserv
preferably

The p indicates ı TEX
should

```
p
```

The symb (see 27).

Strings Bib is
b expand.macros as

```
expand.macros
```

The
v
As ı TEX

```
@        {

@     {
          t
          m
}
```

If Bib is expand.macros turned
–

```
@        {

@     {
  t
  m
}
```

The WGA has 1967. jan has
not ı TEX .bst).

When
is
quotes. p .
then

```
p
```

The
Scrib
can p .
It

```
p
```

Summa

Option		
-m file	*macro.file={file}*	W *file.*
	p =off	Prin used
	expand.macros=on	T
	p =off	Switc macros
	p =on	Enclose of

A.15.

Some Bib run. I TEX
items count.all and
count.used are

```
count.all
```

count.all indicates I TEX

```
count.used
```

count.used forces I TEX
in

Summa

Option		
-#	*count.all=on*	Prin
-@	*count.used=on*	Prin only

A.16. Bi TEX1.0

BIB supp I TEX1.0.

A.16.1.

The

```
@ {
```

Suc
resource apply can

A.16.2.

The

```
@ {
```

This abc is def.
is I TEX
aliases apply can
b

A.16.3.

The

```
@ {
  a
}
```

This
resource apply can

Summa

Option			
	apply	*=on*	Expand
	apply	*=on*	Include ph @include.
	apply	*=on*	apply

B.

B.1. Bib

Bib has
Bib should
the LaTeX Bib .

BibTeX
also Bib .

B.2.

Problems

- The LaTeX \cite macros
  tained
- The Bib ma
  returned
  a
  decision
- The TeX
  enough
- In
  this
- Macro
  will

The Bib also T .
more
in

C.

Sample BIB in lib. Only

C.1.

The

```
a =
a =
a =
b =
c =
c =
c =
c =
c =
c =
d =
d =
e =
e =
f =
f =
f =
f =
f =
f =
i =
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k =
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k =
k =
k =
```

```
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p =
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r =
q =
s =
s =
s =
s =
s =
s =
s =
s =
s =
s =
v =
```

C.2. ATEX

The biblatex con ATEX.

En ATEX

```
n {
n {
```

```
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```

Field ATEX

```
%
n {
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n {
```

```
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n         {
n         {
n         {
n         {
n         {
n         {
n         {
%
n         {
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```

```
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Cross-reference ATEX

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C.3.

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[1] Note `german.sty` or `babel` is LaTeX BibTeX.

C.4.

The
Others

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