B

T A Files B ı TEX

ersion V

Bib

d $\mathcal{G}er$ $\mathcal{N}eugeb$

Abstract

pro B Bı TEX
to do in ᴬTEX
tended files. B Bı TEX   in Bıʙ T is   Bıʙ
allo   files B ı TEX
and sorting The   B ı TEX.   Bıʙ include
and data B ı TEX
selecting

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E-Mail: gene@gerd-neugebauer.de

Contents

1.

o   The   T   Bɪʙ
no   is

1.1.

[ʙ   a Bɪ TₑX a Lam88,bP   , Pis   ]
gned [in   ᴬTₑX Ldon94]   is   ʙ   ɪ TₑX
                has
         Usuad   ʙ   ɪ TₑX.

- inserting
- editing
- using
- sorting
- extraction

  eral   Since   sev   ʙ   ɪ TₑX
               to

      ba   **Bi TₑX** is   c   do   ᴬTₑX
                      and
  eac   installdtion.   ₑX

     a   **bib**   is   whenʙ   ɪ TₑX   BibLᴬTₑX
t   a   **bib**   is   files. ʙ   ɪ TₑX
                   act

            bibindex/biblo   is
      file   ʙ   Bɪ TₑX
far   so

     a   **bibso**   is   file. ʙ   ɪ TₑX

       a **bib**   is   ʙ   ɪ TₑX
               file   do   ᴬTₑX

ibtex/bib   **Po**   are
n   B file ʙ a ɪ TₑX   do   ᴬTₑX
       file. ʙ   Bɪ TₑX

5

a **bibto** is
bibliographic to
tasks.

a **bibview** whic file B I TEX
used are do ᴬTEX

a **JabRef** is databases, I TEX
platform

a **BibCa** is
means a

xbibpexg/bibs are
running
fields B I TEX file. B I TEX

an **bibview** is
and in files. B I TEX

a **tkbibtex** is I TEX
ing.

bib Editor B I TEX

O a **qbibman** is T underlying BIB as
library

racuda X11 **Ba** an files, B I TEX

b **BiaTEX-Mo** is
files. B BI TEX de B I TEX-Mo
the for

a **btOOL** is files. B I TEX
een b

This
ha I
13]. short GCIS94 Chapter

Most
are
single

O Still T BIB tries
pro to

1.2.

Bib has
man
options.
resource
T determining Bib .

When Bib has
bibtool[1]. Ta Bib from
preter.

```
bibtool
```

No Bib will
file. B Bi TEX [2] The
that
the

TUsually this Bib in
input
name

```
bibtool file.bib
```

The
pretfile.bib is

No T will e Bib w
T case BibThis .
databasesBi TEX

1.2.1.

files B Bi TEX giv The-s.
sorted
Bib will

```
bibtool      file1.bib
```

With files I -S the ASCI order.

```
bibtool      file1.bib
```

---

[1]Ma
[2]W

y   If   files B   I TEX
           should

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

This
that   rt.fibecessary   so   are
line

1.2.2.

y   Once   file B   I TEX
           reference
           easy
and   it

           One
           Alternativ
           authors
           suc   T   the   BIB   has
           desired

or   try   F   ose en   B   I TEX   [3] Supp
con   is   sample.bib.

r   A   u   @a   {
           t   i   a
           u   o   t
           a   e   j
           l   o   y
           n   u   v
           g   a   n
           t   o   p
                      o   m
                              n
                      }

First,
m   of
           follo

```
bibtool      sample.bib
```

After
output   sample1.bib:

---
[3]Shamelessly   B   I TEX xamples.bib file.

```
A          @a        {
  u          a
  i          t
  o          j
  e          y
  o          v
  u          n
  a          p
  o          m
  o          n
           }
```

Y
the
to

```
bibtool     sample.bib
```

initials The   aamport.la:flats.
          first
          the

          Another
          follo   [4]

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

          The   AampoNot86.
          sample
          generation   necessary A.10 is

1.2.3.

          BIB   can   databases. I TEX
   ws   w   allo B   I TEX
          braces
   T   the b   BIB   can

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

          Since
          w
          bash,...)
          rewrite
          in

---

[4]Note
  quoted

The
closed
then

The
This the   ^).
haracter c
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Next .   .   \ (They).
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oin   instead.)
ould   w

u   a

But
replace men   not   \1 is
the   but
of

Th
sometimes

1.2.4.

b   BIB   can
Ba and   analyzes   `.aux` file

namées. B   I TEX   files B   I TEX

has   Instead   .aux file   -x.

*cument.*bibtool *cumdent.bib*   *-o do*

The   -o follo

This

written

1.2.5.

BIB   can

can   a   [5] As

con

al   bibtool   *tex*   *-o some.bib*

k   This   the   tex in

option -o follo

of

Next

purp   [6]

ct   bibtool   *l.b*ib*le* {*"tex"*} *al*   *-o some.bib*

Note

page [34]).

Finally

tain   *ct*   *sele*

instruction:

ct   *b*   bibto*ol*"*tex"*   *sele* {*title*   *l.bib*$key   } *al*   *-o some.bib*

title   This   the   tex in

o   b

After

short

ct   *"tex"*   bibtool   *sel*d.b*ib*{$key   } *al*   *-o some.bib*

---

[5]Those

    ration   BIB   —whic

[6]Note

    select

a

As
This

ct   *o*

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

similar   A

Note Usually
incomplete—and in   files. B   I TEX
follo

ct   *ok*

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

1.2.6.

Sometimes   sequences. I TEX
ose   p   file B   I TEX
ou   O   I   incompatible   use   ASCI Is   B   I TEX.   do   BIB   to
tric

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

1.2.7.

has B   BI TEX
try   en
those
This

rt.fo   so   {{%1.#s(crossref   }$k }
rt.reverse   so
rt   so

The

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

g

us   Th

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

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

the   If   is   #)
    h   considered.   z whic
to   in

    crossref   a   a if
        or z otherwise.

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

 app   Finally   is $key)

The
fields

1.2.8.

Sometimes   files B   I TEX
bma   files B   I TEX
ha
suc   in   delete.field as
The   T   BIB   with
the   -r.

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

If   eral   delete.field sev
All

Another

```
ep   bibtool ducke _bibtex   e    -o r
```

This   h   eep   k   _bibtex.rsc whic
should   B   I TEX.
And   can   ATEX
command

```
ep   bibtool  duke _biblatex   e    -o r
```

r 1.2.9. Bib   fo   ATEX

BIB   con   files B   I TEX   These   ATEX.
definitions   biblatex.rsc.
command

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

Details C.2.

1.3. Other Bib with

b Bib can and the T data Bib fields B i TEX
form information

T addition already In Bib can
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1.4. Bibtool ,

T b Usually Bib can
HTTP Bib via
can It

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

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

reposted Bib is github[7]. The
sources

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

ha T I con Bib It .
and
The

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

used [7]It

on, list　　In　　　　　　　　　　　　T　　　　a　　　　　　　　　　　　Bib　　　and
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　　　　　　If　　　　　cTn　　　　　　　　　　　olBib　　　y
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  ably   General   GNU   the   or
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A.1.

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A.2.

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the
can

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bibtool
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No BIB   is   what F   BIB   reads
es.   This   file   B   I TEX
when is bib   is
haracter c

This
T   argumen   BIBThe .   in   -h as

```
bibtool
```

This
line

The
command   -r.

```
bibteonlur    r        _file
```

this   In
read
T   to   command   BIB   tries
ariable   v   sBIBTOOLRSC is
resource
All
set
tried   .bibtsoolrsc)
ariable   v   or HOME)
Th(see   files B   I TEX
Thsection A.4).   tried   .rsc is
initialized   is   BIBTINOilly
on   is
resource   resource.sea   .

```
resource.sea              path
```

When
o   T   -R
can

```
bibtool
```

No
resource   .bibtd   )   my_rsc.
T   Tohndy   BIB   uses   my_rsc:

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

y   If
inclusion   efdthe -R b   the

-r
```
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
resource   a

```
name = {value}
```

the   name is   referance   i TEX
        name can

"

Resource
is   The   =).
syn
resource
kind:

n   • A

s   • A
             bidden

string   • A
             taining
             pairs.

string   • A   aren-   P   {}).
             theses

---

[1] This

ou   Y
                Resource

alue,   v

olean   v   • Bo   on and off.   on, tl, true,
     in   es and y   are
                    ignored. rUe true and T   are
                    as off.

                    • Numeric

                    • String

                Usually   % and
as   # act
     the   to

v   No
                files

resource {additional/resource/file}

s   Th
                -r describ
     erating   op

The   One   rint   p   resource.
     immediately is
          haracter. c
                can
     to   in

In   o   T   rint   p   resource.
he   see

rint | p |

                Finally
                the   next   -- The
                command

bibtoeadur   ommand_c

                This
                terpart.   rint   p   instruction
                command

lo | bibtool   print{hel _world} |

A.3.

in   Bᴛ   as
used   T   ternallyBᴛ   in
l   error   In   Bᴛ   returns   no   `0` if
co   `0.`

Summa

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

A.4.

An
w   immediatelyi is
restriction
dash.   a

```
bibtool     input_file
```

b   The   input can

```
input {input_file}
```

Input
standard

Dep   arT   Bᴛ   there
files. Bfor   ᴛTᴇX a   Bᴛ   uses
extensions
additional
nativ Bᴛ   searc

The
extepsion .bib is
giv

a w b bibtex.sea can
ecification. sp

recto

<div style="background-color:#e0f8e0;padding:8px">bibtex.sea {directo }</div>

parts The
as
BIBINPUTS. to B I TEX
rch.path path. o bibtex.sea T .
hec c
y of

o T
e b erwrites bibtex.env.name o
vironmen en BIBINPUTS.

<div style="background-color:#e0f8e0;padding:8px">bibtex.env.name {ENVIRONMENT_V }</div>

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

<div style="background-color:#e0f8e0;padding:8px">env.sepa {:}</div>

first The The /).
haracter c b dir.file.sepa can

<div style="background-color:#e0f8e0;padding:8px">dir.file.sepa {\}</div>

Note that env.sepa et and dir.file.sepa are
a to
ato all. at env.sepa is ; and
dir.file.sepa is \.

then the If files B I TEX
describ
probably related EX
just I
details.

Summa

Option					
more	*bibtex.env.name*={*var*}	Use	add	*env* to	
		directories	(in- B	I TEX	
	files.	put)			
B	*bibtex.search.path* ={*p* }	Use	find *path*	*p* to B	I TEX
		(input)			
	dir.file.sepa ={*c*}	Use separate	*c* to		
the		from			
	env.sep ={*c*}	Use separate	*c* to		
	path.	a			
list	*-i file* the*input*{*file*}	Add B the I TEX	*file* to		
		files.			

A.5.

By en B I TEX
output in -o as

```
bibtool        output_file
```

Also the output.file can

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

No

A
standard

The
status
W
are
pro
but

W option This q.
toggles

```
bibtool
```

resource The the on or off to quiet:

```
quiet
```

Status

the   This **v.**

mand

```
bibtool
```

The   ose   verb   :

```
verb
```

Another

macros. section A.14 on

Summa

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

A.6.

is   The   files B   I TEX

rather   prin   is   B   I TEX

syn

This   rset.axit.on.erro   pa   If .

tely   BIB   exits

rse.exit.on.erro   pa

nores   Eac   simply   I TEX

y   the   an   BIB   stores

the

e   discarded   b   **pass.comments** can

hange   c

```
pass.comments
```

this   If

file.

The st   B   I TEX

fined   BIBAdditional   **new.entry**

in   as

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

This
defined. *ntholo* ab *A* as
en

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

Eac

When
stance
y b   rint.entry p   The .
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database
to

a The

c The

i The

m The

n The

p The

$ The

S The

s The   rint.all.strings   determines
      whether

The
desirable

```
rint.entry  p              {pn}
```

The
options.
the

rint.line.length   This
          whic
          line.

rint.indent p   This
es   en

n-string

n

   n

    tries

     n

      n

       v

      Bo

      Bo

n

       Bo

Bo

      Bo
ans
    spaces

e   Bo
cords

   ok

rint.align   p   This
and

rint.align.k p   This
commen

rint.align.stping   This
en

rint.align.p p   This
tries

rint.align.comment   This
tries   [2] This

rint.comma.at.end   This
fields   the
prin
determines

rint.equal.right   This
aligned   is
alue   v   on.

rint.newline p   This
This

rint.terminal.comma   This
after
migh

rint.use.tab p   This
inden
disabled   If
defaults   on.

rint.wide.equal   This
forced   h
no
alignmen

supp   This
mal

The
lo

off then
rint.align   p

but   B   I TEX
off.

haraTAB c

off whic

rint.line.length

[2]This

Next
title.

rint.align.k p

```
@Unpublished{
  author
  title
  note
}
```

others",

and

exceeds

rint.line.length

The
the   new.field.The .
the
only

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

This
differen   a

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

String   T   B   I TEX. BIB   normalizes
efore   b
other
i.e.

v olute   symb The .
lower, upper,   closed.

```
symb
```

The
Th
ab
yp   t

The
(seeIn   A.10).
times   es   do B   I TEX
not   reserve.k p   Usually
urned   is
Y

reserve.k   p

it   If
             the
ecially   enced   reserve.k   p   Esp   .
             recognize

Summa

Option				
a	e	new.entry	{typ }	e Define	typ .
a	e	new.field.t	{typ }	e Define	typ .
immediste.exit.on.erro	pa	=on orce	F encoun	
	pass.comments=on en		Do the	
reserve.k p	not =on		Do ing.	
comintualign.comment	=n	Align	n.	
thrint.align.k p	=n	Align	n.	
thrint.align.sting	=n	stringAlign = of	n.	
thrint.align p	=n	normaAlign = of	n.	
rint.commapattervd	=on	Put line		
instead				
t rint.indent p	=n	Inden	n.	
lines rint.line.length	=n	Break	n.	
rintbp p	=n	Num		
rint.use.tabp the	=on	Use haratAB c spaces.		
spaces rint.wide.equal	=off orce	F		
supp	=on	Suppress records.		
e symb er typ ranslate		T e	uptyp :	
er,		w	lo	

A.7.

The
reference   in   -s and -S as

```
bibtool
```

```
bibtool
```

(including The ASCI order
lo The I ASCI order.
ac rtectiv rt.reverse so and so resp

```
rt              so      {on}
rt.reverse      so              {on}
```

rt The so determines
erse so determines I ASCI
order
otherwise.

Alternativ
ification
describ detail. A.10 in

eral The rt.fo so Sev .
tiv

```
rt.fo       so          {%N(autho  }
rt.fo       so          {%N(edito  }
```

Those

```
rt.fo       so          { %N(autho            }
```

This
giv
ey k

rmat Let Without so instruc-
rmat ab tions rt.fo so giv
ld w

Note that ASCI order
the

Usually
arian v b reserve.k p can
cased
the rt.cased ac so to
ey: k

```
reserve.k   p                   {on}
rt.cased        so          {on}
```

Beside
default macros   so   can

rt.macros   so   {off}

ample   An   page   1.2.1 on   7.

Summa

	Option							
sorting	-S				Enable der.			
sorting *rt*	-s	*so*			Enable			
	rt.cased	*so* the	=*on*		Use sorting.			
c	*rt.fo* sort *e*	disjunctiv	{*sp*}	ecifier.	Add *e* the *sp* to sp			
off	*rt.macros*	*so*	=*off* urn		T			
	rt.reverse	*so*rse	=*on*		Rev			

A.8.

BIB mak
regular
regular

concise   A   regex-0.12/regex.texi
T   con   BIB   distribution.
preferable.
sions.

Note

h   **Ordina**   matc
y   An
letters

or   hes F   *c*   *ab* matc   *ab* .

The matc (.)

do   or   hesF   it *a.c* matc   *ab* but
c   matc   *abb* .

The is (∗)
pression.

or hesF follo ab^*c matc ac and
Butbb . c ab .
c

The is (+)
pression,
empt
an

inary

or hesF follo it c $ab+c$ matc Butbb .
not $ac.$

sed **The** is (?)
regular
question

or hesF follo it $ab?c$ matc Butb .
c matc abb . c

The separates
string a

Note

or Fes c | the \ $defc$ matc ab and
$def.$

P can $(\(\))$
paren

Note

or F hes\ | $a\(b\ \ d)c$ matc ab and $adc.$

The matc ($)
anc
expression

or hesF c c ab $aaaab$ but
c matc ab .

The n (^)
to
anc of
the con
describ

c es   or   hesF   *c*   *c*   ˆ*ab* matc   *ab*   but
matc   *aaaab* .

The   are ([])
is   list   then   ˆ)
Otherwise

or   hes F   *c]*   *[ab*   matc   and, *b*,
It   *c.*   *d.*

ar   he*s*   The   *[ˆab*   matc
b,   a,

used   **The**   is   (\)
ecial   sp
treated   is
the   I*f* his   *d* then d^{th}
matc

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

the   If   this   **n** then
newline.

the   If   this   **t** then
single TAB. c

A.9.

A.9.1.   aux **Files**

n   Bib   includes   e   B   I TEX
usually   accomplished   aux file is   aux file
and   It y   b   ATEX.   files B   I TEX
d   the   in   are   aux file
is   Since B   I TEX   it   aux file
input

o   the   T   aux file   -x can
he   the   aux file.

```
bibtool     file.aux
```

Multiple
with   b   extract.file can

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

all

A
ically   rint.all.strings   This f.
man

Note
tries.   file—unless TEX
resolv

One   enis   B   I TEX   giv\nocite{*} is
file   LATEX
same   T   BIB   .

An   page   1.2.4 on   10.

A.9.2.

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

sp   The   select.b   is
for.
has

> select.b   {"some   }

This string   one some   in
The
those
can

> select.b   {*field*$_1$.   *field*$_n$ *"string"*}

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

During   T   BIB   ignores
certain
y   The   a   select.b   As   .
the

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

for   As   y   ev   select.case.sensitive the   select.b
   red   p   no   is
   use   to

   addition   e y In   b   select.b   can
                used
                form   select.b   :

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

Note Cross-references   select.crossrefs is

A.9.3.

              Another
   e   b   The   aux files.
   iden   is   A.8.
   ws   The   select allo
              general

```
.    select.id(field_1 .   field_n "regula _exp        }
```

   no   If
              expression   used.   "." is
              An
              selects   h   *field* whic
   field   *essigmular*   e   r   _exprThe   .
              regular

              The   e b $key, $type,   @typ can
              details.   53 for
              here.
              Analogously
   e   b   general   select.mon.

```
.    select.mon.id(field_1 .   field_n "regula _exp        }
```

              The   b   select.case.sensitive can
   p   is

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

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

ular   A   in   -X as

essiogular   `bibtool`   *r*   *_expr*

The
selectfieldsleneral   If$key.
fields
spaces.

Th   `author` and `editor` are
considered

    `select.fields`   {"autho   }

Without   command   select.fields the
len

ct   "r *essiobibtool*   *sele* {*$key*   *_expr*   }

Note   select.casesensitive and select.fields are
pressions
to
sensitiv

Finlly   extract.regex can

*ression*extract.regex   {*regula _exp*   }

This
ey   k
anish   v

Note Cross-references   select.crossrefs is

A.9.4.

When
cross-references
and   files. B   I TEX

The
select.crossrefs.   y   off b
ignored.

The
referenced

```
    select.crossrefs
```

A.9.5.

pro B   BI TEX
plished   crossref field.

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

Sometimes   th   crossref and
ing
b   expand.crossref.   y   off b
cross-references

The
referenced

```
    expand.crossref
```

Note   T   lik   BIB   acts
means   the not   ine   crossref field
the
title

A   The   crossref field.
recursiv
The   crossref.limit.

This
than
32.

> crossref.limit

[BibLATEX has14]
are crossref. This
exp
an

T T tains BIB con
field
name
name

This tak crossref.map.
sym
This

> crossref.map {source.t }

The
issued

T
yp t

> crossref.map {{source.t $_1$ source.t $_2$} source.field
> rget.t rget.tta rget.tta rget.field $_3$} ta }

rget.{ta rget.tta rget.field

In
as

If
when
newly

Initially
they r.crossref.map clea The .
previously

in

> clea {}

[BibLATEX knb14]
b sp @XData can
y b h xdata whic
comma tries @XData en

```
1           X      x @       {
              o         b
              o         b
              }
w           X      a @       {
            u         p
            d         a
              }
  n         I      i@       {
          u           a
          i           t
          d           x
              }
```

BIB   supp
the   toT   b   crossTher fields BIB   can   xdata fields.
        resourcean   expand.xdata.   y   off b
   can   It

expand.xdata

Summa

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

A.10.

y
eys
free

the

The
b
k
a
to
option -f in

```
bibtool        format
```

This
The   .fo   ey   k   .

ey   *rmat*   {*fo*   }

n

Some   *format* ha
of
w   databse   ı TEX

```
U      @
   u      a
              n         a
    i      t
              x         e
   .      .
}
A      @,          {
   u      a
   i      t
   .      .
}
B     w  @    {
   d      e
   i      t
   .      .
}
M    m  @    {
   e      k
   o      n
}
```

a   **sho**   If   presen   key is
              editor
              only   fmt.name.title
       ey separator   default.k
used.   is.base   ey   k   ).

o T T the BIB to
res conkeyuformat=short -- This .
(remaining

```
n        U      @
r        A      @a        {
o        B   l  @     {
i        M   m  @     {
```

long The
ting

applBdB is
key gformatrlongen -- e w

```
n        U      @
r        A      @a        {
o        B   l  @     {
i        M   m  @     {
```

new.short This sho but
obsoleted is w reserve.k p and

applBdB is
key.formatgrshonurt.need e w

```
n        U      @
r        A      @a        {
o        B   w  @     {
i        M   m  @     {
```

new.long This long but
obsoletewill reserve.k p and

applBdB is
key.formatgrshonurt.need e w

```
n        U      @
r        A      @a        {
o        B   w  @     {
i        M   m  @     {
```

empt The
syn B BI TEX
whic
giv

applBdB is
key.formatgrempty n -- e w

```
U        @
A        @,           {
B     ,  @      {
M     ,  @      {
```

In
matting
done   in   -F as

```
bibtool
```

.genAltermativ   b   ey   k   can

```
ey        k
```

Usually
citations   reserve.k   mean   is
resouonly   If off.   on then
they
white-space   as   B   I TEX)

```
A        @,           {
  u        a
  i        t
  o        j
  e        y
  o        v
  u        n
  a        p
  o        m
  o        n
  }
```

T   reserve.k   p   is on, BIB   still
      can   sreserve.k   p   to on (see   A.6).

    the   When notk   is   empt then
          or
          the   .numb   a   ey   k   If   .
          found
          the
      resouof   .base   ey   k This .
alues   wv   upp ,and ,   Thigit.

lo	generated	digit
key	key	
key*1	key	
key*2	key	
key*3	key	
key*4	key	

w

As
the will e A.11 w
Those
ecify sp

Bo   **reserve.k**   **p**   This
anged   unc   off.

Bo   **reserve.k**   **p**   This
ed   and
s   case   off.

v   **default.k**   The
**key*.

ey   **k**   The
example er   er   w   upp , and , U digit.
letters,

v**ey**   **k**   The
um   n   *.

v **ey**   **k**   The
macros   off.

v   **fmt.name.title** part The   rt   se sho and long to
names   :.

v   **fmt.title.title** The
default   :.

v   **fmt.name.name** The
B   file B the I T_EX when and) ..

v   **fmt.inter.name** The
when   -.

v   **fmt.name.p**   The
formatting   ..

v   **fmt.et.al** The   of thers   and   parts
lt   The   .ea.

fmt.w   The
               considered
    haractersc

 b   The   sho   can
follo   A.11 as

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


          The   A.11.

A.10.1.

    BIB   pro   @Alias definitions
     whoic
oncyrfen   I TEX

    The   can   .mak   ey   k   This .
    in

ey | k |

    The   Thoisf.

Summma

Option					
reserve.k	*p*	not≠*off*	Do presen		
reserve.k	*p*	not =*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		
kase =$\{b\ \ \}$		eys.	Kind k		
ey	*k*	=*off* urn	T		
ey	*k*	the$\{fmt\}$	Set		*fmt.*
ey	*k*	=*on* urn	T		
ey	*k*	=*on* urn	T tries	@Alias en	
			whic h		
ey	*k*	=$\{s\}$	String		
		um	n		

t.

used

used

used

separating

used

used

.base ey of

.expand.macros off

.fo

.generation on

.mak on for

h

.numb to

b

A.11.

A.11.1.

The
an

y

"

This   Since   B   I TEX.

means   no

that   rulesB   I TEX

or   F

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

No
the
are [3]

```
Author
AuthorOrEditor
```
u   A

A.11.2.

The
whichacte%.c
Sintoey   en   B   I TEX
sev

```
%N(author)
```

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

The

%*sign*   (*field*)

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

*ost*tr and *p*   are   *letter.*
qualifier   is
ossibletionally   P   #.
list:

ormat   p F   a   *ost*   In*p*   .
most   *e*   at   *pr* names
          and   .

          pr defaults*ost*   *p*   defaults
     a   See   A.11.10 for

          Example

u   a

---
[3]W
   the

With

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

ormat   n F

a   nlammes   e   pr last
treated   others are   and   lfgreater p   is   ost   p
           haractersc

e   pr defaultsost   p   defaults
sp   This   p format   ost   p
    of   alue ecifierv   n sp   alue   len v
    ecifier.   sp   A.11.10)

Example

t   u   a

With

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

ormat   N F

a   nlammes   e   pr last
treated   others are   and   lfgreater p   is   ost   p
           haractersc

e   pr defaultsost   p   defaults
sp   This   p format   ost   p
    of   alue ecifierv   n sp   alue   len v
    ecifier.   sp   A.11.10)

Example

t   u   a

With

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

ormat   d F

ost   The p th n   e   *pr* digits—coun
1958"   righ   in   "june   formatted   `%2d` results
        58.

pr defaults
defaults   it

ost p defaults
  format   use `%.2d` as

no   If
        `%0d` can

ositiv   P
        ha
this   in

the   If
  single used.   0 is

the   If   required. 0 if
      the
um   n   is   0s

Example

a   p

With

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

ormat   D F
      This   ecifier   d sp
      cated.

Example

a   p

With

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

ak   s T
t   e   A   haracpersc

e   pr   defaults

Example

t   u   a

With

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

ormat   T F
t   e   orAls   *pr* w   then   e   0   *pr* is
ositiv   artificiofl   *os*t   *p*   is   *ost*   *p*   letters
considered.   are

New   red.w   igno   .

e   *pr* defaults*ost*   *p*   defaults

Example

t   i   t

With

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

g   The
sh   o   T
            ered

the use fmt.w In . +, -,
declared <, =, and *, / are

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

Note fmt.w accum is
possible p

ords mat t F w T no
t e or As pr w then e 0 pr is
ositiv artificial ost p is ost p letters
d. are

pr defaults ost p defaults

Example

```
i        t
```

With

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

ormat W F
This T except

Example

```
i        t
```

With

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

ormat w F
This t except

Example

```
i        t
```

With

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

#p Coun

no   the giv If   *sign* is   *sign* is + then

than   *e* the less   this *er* or   *ost*   *p*   then

succeeds   it

uction   others   The   and   whic ,

authors,

the   the   If   *sign* is − then

lik   sign   − acts

p   If ∞.

the   If *a* is   and then

`%l.h#p` succeeds $l \leq a \leq h$.

ha   `%-l.h#p` succeeds $> \; > l$ or *a*   .

e   *osp* rot *h* nd *p*   b

Example

t   u   a

With

c   `%2#p(author)`   *suc*

     `%4#p(author)`   *fails*

c   `%-4#p(author)`   *suc*

c   `%3.4#p(author)`   *suc*

     `%-3.4#p(author)`   *fails*

the   #n Is   #p.

the   #N Is   #p.

#s Coun

no   the giv If   *sign* is   *sign* is + then

than   *e* the less   this *er* or   *ost*   *p*   then

succeeds   it

the   the   If   *sign* is − then

lik   sign   − acts

p   If ∞.

e   *osp* rot *h* nd *p*   b

the   If a is
%l.h#s succeeds $l \le a \le h$.
 ha   %-l.h#s succeeds $>$ $> l$ or a .

Example

i	t

With

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

#w Coun

ordse   w $_{E}$Xing

no   the iv If   *sign* is   *sign* is + then
 e   the less   this or   ost p then
succeeds   it

the   If   *sign* is − then
 lik   sign   − acts

p   If ∞.

ospr oth and p b

the   If a is
%l.h#p succeeds $l \le a \le h$.
 ha   %-l.h#p succeeds $>$ $> l$ or a .

Example

i	t

With

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

the   #t Is   #w.

#W Coun
on   red.w   determined   igno   The .
 after $_{E}$Xing

no   the iv If   *sign* is   *sign* is + then
 e   the less   this or   ost p then
succeeds   it

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

p   If ∞.

e   *osp*rot**h**nd *p*   b

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

Example

t   i   t

With

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

the   `#T` Is   `#W`.

some   If
this   example,   `%t(title)`,

i   t

this   In   `The-Whole-Title`.

The   *(field)* selects
the B   B<small>I</small>T_EX
fails

But
the B   B<small>I</small>T_EX   tak`crossref` is
try   is   en   `crossref` field
the
the   `crossref.lim`it. is   `crossref` field
y   b

conforming   Usually   files B   I T_EX
Nev

o   T   In   0.   `crossref.limit` to
this

A.11.3.

on In
listed

$key This
none

$sortkey This
formed.

ey $default.key This default.k sim-
ilarly fmt.name.title, fmt.title.title, fmt.name.name, fmt.inter.name,
b fmt.name , fmt.et.al can

$source This
this If
then

$type This
an is @ of I TEX article.
yp **@t** This
(ignoring

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

$day This
string
T and BIB run
BIB .
On
his In

$month This
string

$mon This
this if

$year This
string

$hour This
string

$minute This
empt

$second This
empt

`$user` This the `$USER` or

tains empt
con

field. a

udo `$hostname` This `$HOSTNAME`
the or

A.11.4.

Conjunctions
simply
part

the Supp B L TEX editor and year.
conjunction

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

Itor" this If the editor field "E.D. and year field "1992" then
ult the itor:92.

A.11.5.

Dep
language. This e ASCAL P -lik
follo as

art { (*field*) { *then-p* } *else-p* }

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

Let
it author if

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

A.11.6.

general Alternativ The #).

$alternative_1$ # $alternative_2$ # . # $alternative_n$

The
the
whole

An

The   b   A.11.5 can

        %N(author)

he   If
Otherwise

A.11.7.

An   grouping.   for   {})
dence

Coming
w
follo

        {%N(author)

    exampTehe   this   # in

Another
  format   a

        {%0s(@book)

  ecifier   The %0s sp
adding
constraccetss   @book and @proceedTihngs.
pseudo
form
only

A.11.8.

Certain
ignore
it
of
languages

    b   The   igno   can
w
there

rd

```
igno        {w    }
```

o   T
compiled
Afterw
This   r.igno   principal   clea   In   .

eration   op
resources   for

gno

```
clea            {}
```

A.11.9.   Macros TEX/LATEX

When   macros ^{A}TEX
macro   macro ^{A}TEX

b   tex.define can   macros. ^{A}TEX   The ^{A}TEX.
simplest

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

This
replacemen

addition   In
         n   LATEX's \newcommand the

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

The
writing n is

or   F

Note   ignored.   are   =)
w   un

fUsually   I   \).
re   another   u89   This   Kn   ]).
ecially   p   to ≥ 128)
mappropriate EX

or   Fstring   the   \TeX to
TeX.

```
eXTexdefine {\T        }
```

With this book The ould w Work.
nition TeXbook.

Supp
The [4]

```
tax.define {¨     }
```

and With \protect macro
e b

```
texotkedtful[t]={\p1          }
```

Some T also BIB (see
app C).

A.11.10.

Names to BIB tries
them definition i TEX
comp

- The
  case
  or F

- The
  junior
  or F

- The
  letters.
  or F
  ord w

- The T ws BIB kno
  only
  sen.,

Ev
More [88l94] P].

BIB pro
construct sp %p format
(see

---

most   BIB   uses   [5] Initially
fined.   %*l[*fmt.inter.name*]The.
name   %*l[*fmt.inter.name*]%*1f[*fmt.inter.name*].
The   %N and %n.
Th
a   T   name   BIB   issues

b The   new.fo   can

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

This
a   is
used   a   + or   - and
n   a   for, lFinally
argumen
Th

       %*sign e .numb*   [*pro*st[*mid*][*p*   ]

all   The   f denotes   l denotes   v
all   denotes   j denotes
If *sign* is + then   the   *sign* is - then
translated
is * then

b   The   *len* can
truncated   is   haraclensc greater   *len* is
that   p   is   Note∞.
ecifiers   sp
the   The   *numb*   after
tak
giv If [*mid*] is
none
e   giv If [*pr*] is
empt
*ost*giv If [*p*   ] is
empt
No   Cervantes
Saavedra,   This[6].
the

---

[5]The
[6]This

W

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

This
and   M.d.Cer-Saa.

Note
ey   k

A.11.11.

ion.

T
sp
generated:

a   1. If   presentbibkey is

the   2. If
the

the   the3. If   ahtrticle)
journal,
e   b
separated

the   4. If   proceladings)
the
should

the   5. If
the

6. Otherwise
used.
most   at

The
translated
with

The
string.

T

```
e       k               o           =
e       k u         =
e       k                   {           =
e       k               =
{
s           %
    #
```

```
w              0        %
        %        {
        %        {
                 #
w              0        %
        %        {
        %        {
        %        {
                 #
w              0        %
        %        {
        %        {
        %        {
                 #
w              0        %
        %        {
        %        {
        %        {
                 #
s     p        3    y   %     $t
        %        {
        %        #
                 }
4              %        {
                 #
s     p        3    y   %     $t
d              4        %
        ?        #
                 }
```

Since
use
they
statemen
the

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

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

Summa

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

cond

ons

alsoe

ons

all *r.igno*
   e   a
red.w
 o=the text
 o[the-text

A.12.

This

A.12.1.

Certain
F
imp
vided
pro   add.field is
this

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

This   ac   y   e   *field* b   *value* in
do
they

value can   out   ab
"F   .
Supp   With.
time-stamp

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

If
can   ).

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

If
this

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

A.12.2.

vided   Certain   pro delete.field is
ation.

The   *field*:

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

Sev

A.12.3.

The
e   b
ws   eep.field   k   allo
the   In
the

eep.field   k   {*field*}

Sev   b   eep.field   k   can
not
Note
the
Next

eep.field   k   " {*field* if *field$_c$* = *pattern*"}

consists
The   It if.
pseudo-field
matc   is
simplification   As
ou   y
illustrated

eep.field   k   {{*field$_1$* .   *field$_n$*}}
eep.field   k   {{*field$_1$* . " *field$_n$*} if *field$_c$* = *pattern*"}

The
addition   In   field   as   *)
encou name * is

eep.field   k   {*}
eep.field   k if "   {*   *field$_c$* = *pattern*"}

The
y   an
The
satisfies

con   The eep   k   _biblatex.rsc and k   _biblatex.rsc eep field   k   resources
declarations
and B   Bi T$_E$Xsp ^{A}T$_E$X

A.12.4.

Fields
that

b The rename.field can
used

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

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

In the *field* is
Section A.11.3).
staging attern atperin . p is
hes The attern p matc the If *field*.
record

The rewrite.case.sensitive.

The
written

Note
w output. I TEX

Note
in

The rename.field.

The

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

The b title to booktitle for
yp t

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

A.12.5.

Field
data

w   as   [1.2.3.](#)   B   I T_EX

b   The   rewrite.rule can
follo

> .   rewrite.rule {field $field_1$.   field$_n$ #   _text}

. $field_1$. $field_n$ is
whic

all   to

> rewrite.rule {*pattern*   _*text*}

Next
sign

pattern p is
against
then
replacemen

eplac   r   the   _*text* is

use   The   is \replace   hing   is \n' n^{th} matc

attern of p . n is

us   inserted.[7] Th

Other

\$ whic

\@ whic

no   If
only delete.field is
text.

\#

> rewrite.rule {*field*   }
> rewrite.rule {*pattern*}

More

\#

> rewrite.rule { time   {}$" }

---

uture   [7]F
     escaping

deletes

hat is   hes   The{}$.   ^ matc
of $ matc
field

This
the

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

Note
quote

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

The
page   tion A.11.2 on   The 45.
sp
follo
presen

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

The   .* matc
the
Th

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

```
rewrite.case.sensitive
```

blem   A
       T   trols   rewrite.limit con
um   n   rewrite.limit is
       negativ
that   of   rewrite.limit indicates
       limitation

       Next
haracter c   denotes
e   b

- Empt
  whic

e   w

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

The   denotes
The
regular

- Ranges

The   (--).
           deleted

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

ommand Field   c   ᴬTₑX
w   together   ho   \protect macro
                    delimiter

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

A.12.6.

          Fields
  sp   a   rder   rt.o   so   .
          The

=   rt.o   so   field entry…   ₁ #   ₂ #   }

     the   an entry is   book.   are fields
          precedes   author.   Field field1 should   field2 etc.
          whic
          order

h   Another   Suc *.
          kind
 een   b

          An
 sorting a

          Consider

rt.o   so   {*   }
rt.o   so   {misc   }

This
misc

tains   The   so   _fld.rsc con

Summa

Option		
a *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 ={*entify=f#.* }	Sp en	

the

off

rt.o   try

A.13.

Seman
parsing.

A.13.1.

When
doubled
problems
double

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

nains   It
double

c as
O presen file. B I T_EX T B<small>IB</small> will
h remo pass.comments is off,

Sometimes
commen
this rint.deleted.entries If . off then
completely

defaults The h rint.deleted whic
"###". to
this ending @ since

The b check.double.delete can
or F

> check.double.delete

b The check.double can
turned is

> check.double

Chec -d:

```
bibtool
```

A.13.2.

The whic A.8)
ca A.12.5)
same resou check.rule is the check.rule is rewrite.rule.

\#

> check.rule { *field* }

Again *field* *message* is
sign

Eac
giv where *field* (if hes *attern* *p* matc
the writt *message* is
no

treat *message* is us rewrit rule,
com expanded. A.12.5 are

Usually
matc

h   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.   hat   [8] The
at
whole

The
message
then

Otherwise
empt
the   replaced   \@ is

y   the   b   y   \$ b

Summa

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

A.14.

Strings   ɪ TEX
bases.   defi macro.file is
macros

---
[8]In
    But

macro.file {*macro/file/name*}

Note
deserv
preferably

The   rint.all.strings   indicates   file B   I T E X
should

rint.all.strings

The   ol.t   symb   (see 27).

o   Strings rolled   T   con Bɪʙ   is
   y   b   in expand.macros as

expand.macros

The
   alues   v
a   As   file. B   I T E X

```
s      W@      {
B   a  @    {
t          i       t
n          o       m
           }
```

on   applied B   is   expand.macros turned
    if   –

```
g      S      w@      {
B   a  @    {
t        i         t
n        o         m
         }
```

b   that   The   WGA has   1967.   jan has
     not   yle   st B   I T E X   .bst).

When
   used.   is
   races   quotes.   this   rint.b   p   If   .
then

rint.b   p

The
Scrib
can   rint.pa   p   Initially
It

rint.pa   p

Summa

Option				
−m file	*macro.file={file}*ite		W	*file.*
rint.all.strings		*=off*	Prin	
instead			used	
	expand.macros=on	urn	T	
h *rint.b*	*p*	*=off*	Switc	
			macros	
rint.pa	*p*	*=on*	Enclose	
		braces.	of	

A.15.

Some   T   The   Bɪʙ   run.   ʙ   ɪ TᴇX
items   count.all and
count.used are

count.all

count.all indicates   itemsʙ   ɪ TᴇX

count.used

count.used forces   item ʙ   ɪ TᴇX
in

Summa

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

Supp

A.16. Bi TEX1.0

BIB supp B I TEX1.0.

A.16.1.

The

```
@a      {
```

Suc
b   resource apply   can

A.16.2.

The

```
a @     {
```

this   This   treated   abc is   Usdefly
    stored   is   files B   I TEX
    aliases   .alias   apply   can
    e   b

A.16.3.

The

```
k@      {
     a
}
```

This
b   resource apply   can

Summa

Option			
apply	$=on$	Expand	
apply	$=on$	Include	
	y	ph	`@include.`
the *apply*	$=on$	apply	

B.

B.1. Bib

Bib has
Bib should
the   0.99 ᴮᵀ   ɪ TₑX   Bib   .
needsᴮ   Bɪ TₑX
also   Bib   .

B.2.

Problems

- •caᵀhe   is   ʙ   ɪ TₑX   \cite macros
  tained

- • The
  run   returnᵈ   y   Bib   ma
  more   a
  decision

- reading• The   ₑX
  enough

- • In
  this

- • Macro
  will

con The   Bɪʙy   also   oDo   ᴵᵀ   .
more
ᵉʳ   in

73

C.

directory Sample   T   the   Bib   in   lib.
Only

C.1.

The

```
f  p    a              o      =
f  p    a              o      =
f  p    a              o      =
 B i    b              "      =
n  h    c              o      =
f  h    c              o      =
f  h    c              o      =
f  o    c              o      =
2  r    c              3      =
*  e    d              "      =
/  i    d              "      =
:  n    e              "      =
n  x    e              o      =
.  m    f              "      =
-  m    f              "      =
.  m    f              "      =
.  m    f              "      =
:  m    f              "      =
-  m    f              "      =
{  g    i              "      =
{  g    i              "      =
t  g    i              "      =
l  g    i              "      =
l  g    i              "      =
l  g    i              "      =
{  g    i              "      =
{  g    i              "      =
{  g    i              "      =
{  g    i              "      =
d  g    i              "      =
d  g    i              "      =
d  g    i              "      =
{  g    i              "      =
{  g    i              "      =
o  e    k              l      =
n  e    k              o      =
h  e    k              s      =
f  e    k              o      =
f  e    k              o      =
*  e    k              "      =
```

```
{   e   n               "   =
B   e   n               "   =
B   e   n               "   =
C   e   n               "   =
{   e   n               "   =
{   e   n               "   =
{   e   n               "   =
M   e   n               "   =
M   e   n               "   =
M   e   n               "   =
P   e   n               "   =
P   e   n               "   =
T   e   n               "   =
{   e   n               "   =
f   r   p               o   =
f   r   p               o   =
8   r   p               1   =
8   r   p               1   =
1   r   p               1   =
O   r   p               1   =
8   r   p               1   =
n   r   p               o   =
n   r   p               o   =
n   r   p               o   =
\   r   p               "   =
n   r   p               o   =
p   r   p               "   =
n   r   p               o   =
    r   p               2   =
7   r   p               7   =
    r   p               1   =
f   r   p               o   =
f   r   p               o   =
n   r   p               o   =
f   r   p               o   =
n   e   r               o   =
1   e   r               5   =
f   u   q               o   =
f   e   s               o   =
f   e   s               o   =
\   e   s               "   =
f   o   s               o   =
f   o   s               o   =
\   o   s               "   =
n   o   s               o   =
f   o   s               o   =
f   u   s               o   =
o   y   s               l   =
f   e   v               o   =
```

Supp2. ᴬTₑX

tainShe   `biblatex` con   ᴬTₑX.

En   ᴬTₑX

```
r   e   n   A   {
o   e   n   B   {
```

V	e	n	M	{
n	e	n	I	{
o	e	n	B	{
u	e	n	S	{
o	e	n	B	{
o	e	n	C	{
V	e	n	M	{
n	e	n	I	{
u	e	n	S	{
a	e	n	M	{
i	e	n	M	{
n	e	n	O	{
a	e	n	P	{
e	e	n	P	{
u	e	n	S	{
r	e	n	P	{
V	e	n	M	{
e	e	n	R	{
V	e	n	M	{
n	e	n	I	{
e	e	n	R	{
h	e	n	S	{
n	e	n	T	{
d	e	n	U	{
u	e	n	C	{
u	e	n	C	{
u	e	n	C	{
u	e	n	C	{
u	e	n	C	{
o	e	n	C	{
l	e	n	C	{
a	e	n	E	{
h	e	n	M	{
e	e	n	P	{
W	e	n	T	{
r	e	n	W	{
u	e	n	A	{
i	e	n	A	{
o	e	n	B	{
m	e	n	C	{
u	e	n	I	{
e	e	n	J	{
e	e	n	L	{
e	e	n	L	{
o	e	n	L	{
u	e	n	M	{
e	e	n	M	{
e	e	n	P	{
o	e	n	R	{
t	e	n	S	{
i	e	n	S	{
i	e	n	V	{
D	e	n	X	{

Field   ^AT_EX

s	%			
e	n	e	{	
e	n	e	{	
e	n	e	{	
e	n	h	{	

```
e          e    n    k    {
a          e    n    l    {
p          e    n    o    {
r          e    n    p    {
h          e    n    s    {
o          e    n    s    {
o          e    n    s    {
o          e    n    s    {
r          e    n    c    {
d          e    n    x    {
r          e    n    x    {
           d    %
b          e    n    a    {
d          e    n    a    {
d          e    n    a    {
f          e    n    a    {
n          e    n    a    {
n          e    n    a    {
u          e    n    a    {
u          e    n    a    {
o          e    n    b    {
o          e    n    b    {
o          e    n    b    {
h          e    n    c    {
o          e    n    c    {
a          e    n    d    {
o          e    n    d    {
d          e    n    e    {
d          e    n    e    {
d          e    n    e    {
d          e    n    e    {
d          e    n    e    {
d          e    n    e    {
d          e    n    e    {
i          e    n    e    {
p          e    n    e    {
p          e    n    e    {
v          e    n    e    {
v          e    n    e    {
i          e    n    f    {
o          e    n    f    {
e          e    n    g    {
o          e    n    h    {
n          e    n    i    {
n          e    n    i    {
n          e    n    i    {
s          e    n    i    {
s          e    n    i    {
s          e    n    i    {
s          e    n    i    {
s          e    n    i    {
s          e    n    i    {
s          e    n    i    {
```

```
e        n        j        {
e        n        j        {
e        n        j        {
e        n        l        {
e        n        l        {
e        n        l        {
e        n        b        {
e        n        m        {
e        n        m        {
e        n        m        {
e        n        m        {
e        n        n        {
e        n        n        {
e        n        n        {
e        n        o        {
e        n        o        {
e        n        o        {
e        n        o        {
e        n        o        {
e        n        o        {
e        n        p        {
e        n        p        {
e        n        p        {
e        n        p        {
e        n        p        {
e        n        p        {
e        n        r        {
e        n        h        {
e        n        p        {
e        n        s        {
e        n        s        {
e        n        s        {
e        n        s        {
e        n        s        {
e        n        s        {
e        n        s        {
e        n        s        {
e        n        t        {
e        n        t        {
e        n        t        {
e        n        t        {
e        n        u        {
e        n        u        {
e        n        v        {
e        n        er       { v          e     = V              }
e        n        v        {
e        n        v        {
e        n        y        {
a        %
e        n        a        {
e        n        p        {
c        %
e        n        n        {
e        n        n        {
e        n        n        {
e        n        n        {
e        n        n        {
e        n        l        {
e        n        l        {
e        n        l        {
```

```
i          e      n      l      {
i          e      n      l      {
i          e      n      l      {
s          e      n      u      {
s          e      n      u      {
s          e      n      u      {
s          e      n      u      {
s          e      n      u      {
e          e      n      v      {
e          e      n      v      {
e          e      n      v      {
```

Cross-reference   LaTeX

```
i    r    c    {    {
v              m    {
          }
b    r    c    {    {
 b             v       m
          }
b    r    c    {    {
 b             v       m
          }
b    r    c    {    {
 b             v       m
          }
c    r    c    {    {
 i             a       m
v              m       {
          }
c    r    c    {    {
 i             a       m
v              m       {
          }
c    r    c    {    {
 i             a       m
v              m       {
          }
p    r    c    {    {
 i             a       m
 p             v       m
          }
p    r    c    {    {
 i             a       m
 p             v       m
          }
p    r    c    {    {
 i             a       m
 p             v       m
          }
i    r    c    {    {
 o             o       b
 o             o       b
          }
i    r    c    {    {
 o             o       b
 o             o       b
          }
i    r    c    {    {
 o             o       b
 o             o       b
```

```
}
i   r   c   {       {
 o           o       b
o            c       {
        }
i   r   c   {       {
 o           o       b
o            c       {
        }
i   r   c   {       {
 o           o       b
o            c       {
        }
    r   c   i       {
 o           r       p
        }
    r   c   i       {
 o           r       p
        }
    r   c   i       {
 o           r       p
        }

a   r   c   {       {
 r           e       p
        }
a   r   c   {       {
 r           e       p
        }
```

C.3.

The   `tex_def` translates
tions.

Ä   a   {fla} in   ı TEX   Ae.[1]

Additionally

```
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
e   t   \       {
```

understo [1]Note   o   b   `german.sty` or `babel` is   T   nor в   ı TEX   Bıв   .

C.4.

n

The
Others

iso2tex
define compatible TEX
sequences.

iso_def
define compatible EX

rt **so _fld**
try defines en B I TEX

tains **check_y**
con
um n

es **month**
tries strings I TEX
other

opt
cop OPT prefixes

races **b**
tries

eep k **_bibtex**
defines yles st B I TEX
e b

eep k **_biblatex**
defines yles st ATEX
b to

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anion pAddison-W

T [Kn Donald The $_EX$Addison-W
edition,

[Lam94] Leslie L^AT_EX: Addison-W
Publishing

Biblate[Leh14] Philipp The
ersion Citations,

[P Oren в Bı T$_E$X88g, 1988.

[P Oren Dstyles ing ı T_EX 1988. ,

85