

# A Direct Style for ArsT<sub>E</sub>Xnica

Jean-Michel Hufflen

GUIT, Torino

26 October 2019

Building Bibliographies

MIBibTeX for end-users

MIBibTeX for .bib files maintainers

MIBibTeX for ArsT<sub>E</sub>Xnica

Conclusion

## Contents

Building  
Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

# BibTeX Processors

A Direct Style  
for ArsTeXnica

Jean-Michel  
Hufflen

Contents

**Building  
Bibliographies**

MI<sub>B</sub>ibTeX for  
end-users

MI<sub>B</sub>ibTeX for  
.bib files  
maintainers

MI<sub>B</sub>ibTeX for  
ArsTeXnica

Conclusion

BIB<sub>T</sub>E<sub>X</sub>  $\Leftarrow$  quite old, bibliography styles are written using a very old-fashioned language.

# BibTeX Processors

A Direct Style  
for ArsTeXnica

Jean-Michel  
Hufflen

Contents

**Building  
Bibliographies**

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsTeXnica

Conclusion

BIBTeX  $\Leftarrow$  quite old, bibliography styles are written using a very old-fashioned language.

biber and the biblatex package  $\Leftarrow$  better service, but difficult to revert to 'old' BIBTeX.

BIB<sub>T</sub>E<sub>X</sub>  $\Leftarrow$  quite old, bibliography styles are written using a very old-fashioned language.

biber and the biblatex package  $\Leftarrow$  better service, but difficult to revert to 'old' BIB<sub>T</sub>E<sub>X</sub>.

For example, DATE field instead of YEAR, MONTH (and DAY).

# Considerations about encodings

We used to type accented letters with command accents,  
e.g.:

```
L'Unit\‘{a}
```

## Contents

### Building Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

# Considerations about encodings

We used to type accented letters with command accents,  
e.g.:

```
L'Unit\‘{a}
```

but we do not anymore in L<sup>A</sup>T<sub>E</sub>X source texts. Entering:

```
JOURNAL = L'Unità
```

within a .bib file.

# Considerations about encodings

We used to type accented letters with command accents,  
e.g.:

```
L'Unit\‘{a}
```

but we do not anymore in L<sup>A</sup>T<sub>E</sub>X source texts. Entering:

```
JOURNAL = L'Unità
```

within a .bib file.

New standard *de facto*  $\implies$  UTF 8 (ArsT<sub>E</sub>Xnica, L<sup>A</sup>T<sub>E</sub>X).



# Considerations about encodings

We used to type accented letters with command accents,  
e.g.:

$$\text{L'Unit}\backslash\text{'\{a\}}$$

but we do not anymore in L<sup>A</sup>T<sub>E</sub>X source texts. Entering:

$$\text{JOURNAL} = \text{L'Unit}\grave{\text{a}}$$

within a .bib file.

New standard *de facto*  $\implies$  UTF 8 (ArsT<sub>E</sub>Xnica, L<sup>A</sup>T<sub>E</sub>X).  
.bib files using UTF 8.

# Considerations about encodings

We used to type accented letters with command accents,  
e.g.:

```
L'Unit\‘{a}
```

but we do not anymore in L<sup>A</sup>T<sub>E</sub>X source texts. Entering:

```
JOURNAL = L'Unità
```

within a .bib file.

New standard *de facto*  $\implies$  UTF 8 (ArsT<sub>E</sub>Xnica, L<sup>A</sup>T<sub>E</sub>X).

.bib files using UTF 8.

Some 'old' .bib files in Latin 1, Latin 2, etc. with BIBT<sub>E</sub>X8.

A long time ago  $\Leftarrow$  first version ( $\simeq$  2004, 2005).

A long time ago  $\Leftarrow$  first version ( $\simeq$  2004, 2005).  
Then many experiments, e.g., dealing with *inexact*  
information  $\Leftarrow$  GUIT 2014, at Verona.

A long time ago  $\Leftarrow$  first version ( $\simeq$  2004, 2005).

Then many experiments, e.g., dealing with *inexact*  
information  $\Leftarrow$  GUIT 2014, at Verona.

I started a new public version (1.4) managing encodings in  
the fall of 2015.

A long time ago  $\Leftarrow$  first version ( $\simeq$  2004, 2005).

Then many experiments, e.g., dealing with *inexact*  
information  $\Leftarrow$  GUIT 2014, at Verona.

I started a new public version (1.4) managing encodings in  
the fall of 2015.

Why not before?

A long time ago  $\Leftarrow$  first version ( $\simeq$  2004, 2005).

Then many experiments, e.g., dealing with *inexact*  
information  $\Leftarrow$  GUIT 2014, at Verona.

I started a new public version (1.4) managing encodings in  
the fall of 2015.

Why not before?

I was waiting for the new Scheme standard, making this  
programming language Unicode-compliant.

A long time ago  $\Leftarrow$  first version ( $\simeq$  2004, 2005).

Then many experiments, e.g., dealing with *inexact*  
information  $\Leftarrow$  GUIT 2014, at Verona.

I started a new public version (1.4) managing encodings in  
the fall of 2015.

Why not before?

I was waiting for the new Scheme standard, making this  
programming language Unicode-compliant.



# Bibliographies in Scheme?

A Direct Style  
for ArsT<sub>E</sub>Xnica

Jean-Michel  
Hufflen

Contents

**Building  
Bibliographies**

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

As for any Lisp dialect, Scheme's format is the same for *programs* and *data*, e.g., (+ 26 10).

# Bibliographies in Scheme?

A Direct Style  
for ArsT<sub>E</sub>Xnica

Jean-Michel  
Hufflen

Contents

**Building  
Bibliographies**

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

As for any Lisp dialect, Scheme's format is the same for *programs* and *data*, e.g., (+ 26 10).  
Useful for *customisation* (cf. Emacs).

# Bibliographies in Scheme?

As for any Lisp dialect, Scheme's format is the same for *programs* and *data*, e.g., `(+ 26 10)`.

Useful for *customisation* (cf. Emacs).

Scheme is a *functional* programming language:

```
(lambda (f2) (f2 26 10))
```

# Bibliographies in Scheme?

As for any Lisp dialect, Scheme's format is the same for *programs* and *data*, e.g., (+ 26 10).

Useful for *customisation* (cf. Emacs).

Scheme is a *functional* programming language:

```
(lambda (f2) (f2 26 10))
```

When you design a *bibliography style*, you consider data and decide how to organise them.

# How?

MIBibT<sub>E</sub>X can:

- ▶ *interpret* a .bst file, e.g., arstexnica.bst;

# How?

MIBibT<sub>E</sub>X can:

- ▶ *interpret* a .bst file, e.g., arstexnica.bst;
- ▶ *apply* an XSLT stylesheet to (S)XML format used for bibliographies;

# How?

MIBibT<sub>E</sub>X can:

- ▶ *interpret* a .bst file, e.g., arstexnica.bst;
- ▶ *apply* an XSLT stylesheet to (S)XML format used for bibliographies;
- ▶ run a *direct* bibliography style, wholly written in Scheme.

Make precise the encoding at the beginning of a .bib file:

```
%encoding = utf8
```

Contents

Building  
Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion



Make precise the encoding at the beginning of a .bib file:

```
%encoding = utf8
```

Many byte-based encodings are processed now (Latin 1, Latin 2, UTF 8, ...)

Contents

Building  
Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

Make precise the encoding at the beginning of a .bib file:

```
%encoding = utf8
```

Many byte-based encodings are processed now (Latin 1, Latin 2, UTF 8, ...) but *not* UTF 16.

Contents

Building  
Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

Make precise the encoding at the beginning of a .bib file:

```
%encoding = utf8
```

Many byte-based encodings are processed now (Latin 1, Latin 2, UTF 8, ...) but *not* UTF 16.

If this directive is absent, MIBIBT<sub>E</sub>X tries to guess the encoding by means of the operating system interface. Personally, I do not recommend that.

Contents

Building  
Bibliographies

MIBibT<sub>E</sub>X for  
end-users

MIBibT<sub>E</sub>X for  
.bib files  
maintainers

MIBibT<sub>E</sub>X for  
ArsT<sub>E</sub>Xnica

Conclusion

Make precise the encoding at the beginning of a .bib file:

```
%encoding = utf8
```

Many byte-based encodings are processed now (Latin 1, Latin 2, UTF 8, ...) but *not* UTF 16.

If this directive is absent, MIBIBT<sub>E</sub>X tries to guess the encoding by means of the operating system interface. Personally, I do not recommend that.

Default encoding is Latin 1, but can (will) be changed.

Contents

Building  
Bibliographies

MIBibT<sub>E</sub>X for  
end-users

MIBibT<sub>E</sub>X for  
.bib files  
maintainers

MIBibT<sub>E</sub>X for  
ArsT<sub>E</sub>Xnica

Conclusion

# Compatibility with biblatex

A Direct Style  
for ArsT<sub>E</sub>Xnica

Jean-Michel  
Hufflen

Contents

Building  
Bibliographies

**MIBibTeX for  
end-users**

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

You can use the DATE field, even if you use 'old' styles.

You can use the DATE field, even if you use 'old' styles.  
Fields SORTTITLE and SORTYEAR recognised and processed.

*Pay attention!!* The latter is less permissive than the former!

*Pay attention!!* The latter is less permissive than the former!  
Your .bib files will be cleaned up from most typing mistakes,  
but you will need some steadiness to reach this result.

Contents

Building  
Bibliographies

MIBibT<sub>E</sub>X for  
end-users

**MIBibT<sub>E</sub>X for  
.bib files  
maintainers**

MIBibT<sub>E</sub>X for  
ArsT<sub>E</sub>Xnica

Conclusion



*Pay attention!!* The latter is less permissive than the former!  
Your .bib files will be cleaned up from most typing mistakes,  
but you will need some steadiness to reach this result.  
Unrecognised field names  $\Leftarrow$  (*warning messages*).

*Pay attention!!* The latter is less permissive than the former!  
Your .bib files will be cleaned up from most typing mistakes,  
but you will need some steadiness to reach this result.  
Unrecognised field names  $\Leftarrow$  (*warning messages*).  
Numeric or formatted fields, e.g., YEAR or MONTH.

*Pay attention!!* The latter is less permissive than the former!  
Your .bib files will be cleaned up from most typing mistakes,  
but you will need some steadiness to reach this result.  
Unrecognised field names  $\Leftarrow$  (*warning messages*).  
Numeric or formatted fields, e.g., YEAR or MONTH.  
Fields related to *person names* or *URLs*.

# Interpretation or direct style?

A Direct Style  
for ArsT<sub>E</sub>Xnica

Jean-Michel  
Hufflen

Contents

Building  
Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

You can change your arstexnica.bst file with immediate effect. . .

# Interpretation or direct style?

You can change your arstexnica.bst file with immediate effect. . .

. . . or ask me to update the direct style, providing more checks.

# Interpretation or direct style?

You can change your arstexnica.bst file with immediate effect. . .

. . . or ask me to update the direct style, providing more checks.

Interface with XML.

*No bug?*

I cannot ensure that,

Contents

Building  
Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

# No bug?

I cannot ensure that,  
I am not sure to be able to promise a money amount for a  
person finding a bug, as Donald Knuth did for T<sub>E</sub>X,



# No bug?

I cannot ensure that,  
I am not sure to be able to promise a money amount for a person finding a bug, as Donald Knuth did for T<sub>E</sub>X,  
but I have not found bugs for a long time.

# Availability

Source files  $\Leftarrow$  immediate.

Contents

Building  
Bibliographies

MIBibTeX for  
end-users

MIBibTeX for  
.bib files  
maintainers

MIBibTeX for  
ArsT<sub>E</sub>Xnica

Conclusion

# Availability

Source files  $\Leftarrow$  immediate.

Will be available at the CTAN  $\Rightarrow$  re-organisation in progress.

Source files  $\Leftarrow$  immediate.

Will be available at the CTAN  $\Rightarrow$  re-organisation in  
progress.

End-user manual planned for the beginning of November  $\Rightarrow$   
looking for an Italian translator.

# Last words

That's a gift: try it for free! 😊