From MlBibTEX 1.3 to 1.4

Jean-Michel HUFFLEN
DISC — University of Franche-Comté
BachoTeX, 1st May 2015
Contents

Some history

The point about M\textsc{LiBIBT}\textsc{EX}

New version

Bibliographies now

Conclusion
The beginning.

MlBIBTEX 1.1 $\leftarrow$ some additional functions written using C, in order to put multilingual features into action.
The beginning... 

M|B|B|T|E|X 1.1 ← some additional functions written using C, in order to put *multilingual features* into action.

In fact, these features induce deeper rewriting or adaptation.
The beginning... 

\texttt{M\textsc{l}B\textsc{i}B\textsc{t}E\textsc{x} 1.1} $\leftarrow$ some additional functions written using C, in order to put \textit{multilingual features} into action.

In fact, these features induce deeper rewriting or adaptation.

\texttt{M\textsc{l}B\textsc{i}B\textsc{t}E\textsc{x} 1.2} $\leftarrow$ based on XML-like syntax for bibliographies, specified by a DTD.
Intermezzo

Which programming language?

C?
Intermezzo

Which programming language?

C? Dangerous.
Intermezzo

Which programming language?

C? Dangerous.

Java? Too slow, not very suitable.
Which programming language?

C? Dangerous.

Java? Too slow, not very suitable.

A functional programming one?
Intermezzo

Which programming language?
C? Dangerous.
Java? Too slow, not very suitable.
A functional programming one?

(lambda (f2) (f2 1 2))
Which programming language?

C? Dangerous.

Java? Too slow, not very suitable.

A functional programming one?

\[(\text{lambda } (f2) (f2 \ 1 \ 2))\]

+ SXML format + same format for programs and data \(\Rightarrow\) Scheme.
MlBibTEX 1.3

Provide *actual programming tools* for operations clearly related to programming (e.g., lexicographic orders).
MLBib\TeX{} 1.3

Provide *actual programming tools* for operations clearly related to programming (e.g., lexicographic orders).

Some .bib files may be rejected because of type errors: e.g., the \texttt{YEAR} field *must* be a year.
Analysis

We perform a syntactic and semantic analysis as strong as possible.
Analysis

We perform a syntactic and semantic analysis as strong as possible.

Example: components of a person name are destructured as deeply as possible.
Analysis

We perform a syntactic and semantic analysis as strong as possible.

Example: components of a person name are destructured as deeply as possible.

Applying additional checking is (quite) easy.
What’s the point?

Used for a few applications, but users were fully satisfied.
What’s the point?

Used for a few applications, but users were fully satisfied.

- Producing institutions’ activity report.
- Populating an open-archive site.
- Some Sci-Fi bibliographies.
MlBibTeX 1.3 for a long time

Release numbers identified by geographical names.
MLBibTEX 1.3 for a long time

Release numbers identified by *geographical names*.

Presently: Verona’s version.
Dealing with formats

.bib $\iff$ (S)XML.
Dealing with formats

.bib $\iff$ (S)XML.

Parser XML $\iff$ SXML unparsers.
Dealing with formats

.bib $\iff$ (S)XML.

Parser XML $\iff$ SXML unparsers.

Parser JSON $\implies$ SXML.
Dealing with formats

\[ .\text{bib} \implies (S)\text{XML}. \]

Parser XML $\iff$ SXML unparsers.

Parser JSON $\implies$ SXML.

Planned: Refer $\implies$ SXML.
Dealing with formats

.bib $\rightarrow$ (S)XML.

Parser XML $\leftrightarrow$ SXML unparser.

Parser JSON $\rightarrow$ SXML.

Planned: Refer $\rightarrow$ SXML.

Also: \LaTeX $\rightarrow$ actions.
Additions

Multilingual annotations.
Additions

Multilingual annotations.

New syntax for person names by means of *keywords*. 
Additions

Multilingual annotations.

New syntax for person names by means of *keywords*.

Namespaces in order to solve name conflicts among `.bib` files ⇐ BachoTeX 2014.
Inexact years (option)

YEAR = {ca1492} YEAR = {ca-429}
Inexact years (option)

YEAR = \{ca1492\} \quad \text{YEAR} = \{ca-429\}

‘?’ for an unknown digit: 154? , 15??.
Inexact years (option)

YEAR = \{ca1492\} \quad \text{YEAR} = \{ca-429\}

‘?’ for an unknown digit: 154?, 15??.

An unknown digit cannot be followed by an exact one.
Surmised or unknown authors

?? Arthur Reutenauer $\iff$ surmised
?? and Arthur Reutenauer $\iff$ unknown
Ordering years

An inexact year is ranked after the same exact year:

1492 < ca1492
Ordering years

An inexact year is ranked *after* the same exact year:

1492 < ca1492

A question mark is ranked *after* the digit year it can replace.
Ordering years

An inexact year is ranked after the same exact year:

\[ 1492 < \text{ca1492} \]

A question mark is ranked after the digit year it can replace.

Inexact years are sorted according to the number of occurrences of the ‘?’ sign:

\[ 1599 < \text{ca1599} < 15? < 15?? \]
Ordering names

An unknown author is ranked *before* any known one:

?? < Jerzy B. Ludwichowski
An unknown author is ranked *before* any known one:

?? < Jerzy B. Ludwichowski

An author with uncertain identity is ranked *after* the same ‘sure’ author:

Bogus\l\aw Jackowski < ?? Bogus\l\aw Jackowski
From \texttt{MlBibTeX} 1.3 to 1.4

Scheme’s standard has changed:

\[ R^5RS \iff (R^6RS) \iff R^7RS \]
From M\textbackslash{}lBib\textTeX{} 1.3 to 1.4

Scheme’s standard has changed:

$$R^5RS \implies (R^6RS) \implies R^7RS$$

New standard fully Unicode-compliant.
From MlBib\TeX 1.3 to 1.4

Scheme’s standard has changed:

\[
R^5RS \implies (R^6RS) \implies R^7RS
\]

New standard fully Unicode-compliant.

Dealing with encodings.
New features

Encoding directives for .bib files.
New features

Encoding directives for .bib files.

Encoding output.
New features

Encoding directives for .bib files.

Encoding output.

Only byte-based encodings will be available for the 1st release.
New features

Encoding directives for .bib files.

Encoding output.

Only byte-based encodings will be available for the 1st release.

Saving a bibliography as an XML file.
New features

Encoding directives for .bib files.

Encoding output.

Only byte-based encodings will be available for the 1st release.

Saving a bibliography as an XML file.

Towards other projects

Programs mlbiblatex and mlbibcontext.
Towards other projects

Programs mlbiblatex and mlbibcontext.

The DATE field of biblatex is recognised even if this package is not used.
Towards other projects

Programs mlbiblatex and mlbibcontext.

The DATE field of biblatex is recognised even if this package is not used.

COLLABORATOR, TRADUCTOR $\rightarrow$ next version.
A point of view

Several projects of improving expressive power of bibliography database files exist, but they follow incompatible directions.
A point of view

Several projects of improving expressive power of bibliography database files exist, but they follow incompatible directions.

Maybe should a common project put a new standard into action?
A programmer’s point of view

That was here, in 2006.
A programmer’s point of view

That was here, in 2006.

Since this time, we have been able to add many features ‘original’ \textit{M\textbackslash{}BIB\textbackslash{}TE\textbackslash{}X}. 

A programmer’s point of view

That was here, in 2006.

Since this time, we have been able to add many features ‘original’ M\texttt{\LaTeX}.

So we can be confident with the new version in preparation and we can think that we will go on!