MPlib  v2.000

Summer 2010

May 1, Bachotek
MPlib v2.000

(TEX Live 2010 Summer 2010 Autumn 2010 Summer 2011)

February 27, Vienna
March 5, Dortmund
September, Brejlov
April 1, Bremen

September 4, The Hague
May 1, Bachotek
November 15, Paris
MPlib  v2.000

(TEX Live 2010  Summer 2010
Autumn 2010  Summer 2011
Autumn 2011)

February 27, Vienna  September 4, The Hague
March 5, Dortmund  May 1, Bachotek
September, Brejlov  November 15, Paris
April 1, Bremen  April 29, Bachotek
Calculus engines

- scaled 32-bit (compatibility mode)
- IEEE floating point (a.k.a. double)
- MPFR (arbitrary precision, binary)
- decNumber (arbitrary precision, decimal)

(future extensions possible)

user-configurable precision for the arbitrary precision engines
Tentative input
Why it is taking so long ...
An example: a simple procedure
Planning

• an alpha release with only scaled 32-bit and IEEE double will be available soon (around EuroBachoTEX)
• then a beta release with all four engines (in the Summer)
• then a gamma release with memory leaks fixed (Autumn/Winter)
• finally, MetaPost 2.0 (for TEX Live 2012 ?)
MPlib v2.000

(TEX Live 2010 Summer 2010 Autumn 2010 Summer 2011 Autumn 2011)

February 27, Vienna September 4, The Hague
March 5, Dortmund May 1, Bachotek
September, Brejlov November 15, Paris
April 1, Bremen April 29, Bachotek
MPlib v1.750

BachoTEX 2011

April 29, Bachotek
What it does

- actually released!
- two engines: scaled 32-bit and IEEE double
- switching to IEEE on the commandline: `mpost --math=double mpman`
- numerical values can range up to 1.0E+307 (approx.)
- `warningcheck` kicks in where exact representation is no longer possible (4.5E+15)
beginfig(1);
warningcheck:=0;
path p;
p = fullcircle scaled 23.45678888E-200;
p := p scaled 1E201;
draw p;
endfig;
end.
What it does not

• no precision control for doubles
• alpha 'quality', so lots of bugs
• some internals like intersection times do not take advantage of extra precision yet
MPlib Funding