

# MetaPost: how we adapt

# 1 Development Stage

- I we started with simple usage (logos) and PostScript output
- II then we moved on to conversion to pdf using  $\text{T}_{\text{E}}\text{X}$  macro solution
- III this has the advantage that fonts are handled by  $\text{T}_{\text{E}}\text{X}$
- IV for a long time this was a generic solution (later became the MkII variant)

# 2 Development Stage

- I we added some extensions (transparency, cmyk, etc) and MetaFun showed up
- II that extension mechanism uses special colors as signals
- III we always collected `btex ... etex` in order to speed up processing
- IV in addition we added `texttext` and similar features
- V communication between MetaFun and ConTEXt became more advanced over time

# 3 Development Stage

- I when Lua<sub>T</sub>E<sub>X</sub> showed up a substitution based lua converter was written
- II later when lpeg came around an experimental lpeg converter showed up
- III some changes were made to text processing and run management

# 4 Development Stage

- I the arrival of mplib had rather big consequences
- II integration of MetaFun became less of a runtime burden
- III a more definitive lpeg converter was written
- IV text handling was kept internal (but still needs two passes)

# 5 Development Stage

- I some extensions were changed to use the new pre/postscripts functionality
- II the lpeg converter was adapted accordingly
- III multiple (independent) METAPOST instances were now supported
- IV the chemical code was overhauled and moved to the core

# 6 Development Stage

- I by now all extensions use pre/postscripts
- II this made it easier to add more extend functionality
- III again the lpeg converter was adapted (simplified)
- IV it became possible to do some color trickery with text
- V but (till now) color spaces are more complex (mp has a mixed model)
- VI so we might move towards a slightly different approach
- VII a couple of helpers were added for Mojca (some more will follow)

# 7 Development Stage

- I we're now splitting the code in MpII and MpIV code bases
- II from now on the focus will be on MpIV
- III the (rather old) MetaFun code will be cleaned up
- IV where possible namespaces will be added
- V as MetaFun us loaded runtime we see an impact on startup time (quite some files)
- VI so maybe we will use a packed and/or zipped pseudo format file for faster loading



# 8 Development Stage

- I an overhaul of the flowchart code is on the agenda
- II we also want to finish (and cleanup) the chemical related code
- III simple data/graphics helpers will be provided (graph replacement)
- IV and of course we keep moving on (who knows what METAPOST 2 will bring us)
- V some examples: tests/mkiv/metapost/plugins-\*