More or Less
Less or More
Objectives

- add (non macro based) scripting to TEX
- bring OpenType into the engine
- provide interfaces to internals for macro writers
- make the engine suitable for more complex scripts
Status

• triggered by experiment with SciTE and Lua
• started as a pet project of Hans and Hartmut
• Taco got interested as well
• became adopted by the pdfTEX team
• got a development grant from csu (Idris)
• beta version will be launched at TUG 2007
• production version available somewhere in 2008
Development

- mainly done by Taco and Hans (man-years)
- quite extensive exchange of code and tests (Skype)
- testing in real situations (manuals, documents)
- throw away code and redesign when needed
- still on a (very tight) schedule
Tasks

- switch to 16/32 bits where needed
- replace the io machinery
- replace the file searching
- incorporate aleph features when applicable
- add open type font readers and embedders
- provide more flexible hyphenation
- provide list manipulation
Experiments

- logging at several levels
- reading from zip and using protocols
- conversions normally done in macros
- error handling (much work to be done)
- caching data when possible (speed-up)
- (virtual) fonts finally accessible
Insights

• 8 bit output: using private area in unicode (“10FF00”)
• use luaTEX as Lua engine (--luaonly, luatexlua)
• bytecode arrays, ini files, starting up issues
• stick to Lua state 0 for main things
• looping over bytepairs and UTF-8
• rounding around zero (non E syntax)
• include a couple of libraries
• many small details (that we try to document in a history)
• tables: texio, kpse, tex, font, statistics, texconfig, call-back
• libraries and extensions: lua, lfs, zip, unicode
• access to TEX's internal variables (will be more)
• access to registers
• access to box dimensions
• hooks into logging (start/stop etc)
• defining fonts
• loading fonts
locating files
loading files (handles or blobs)
only pops in when used
can be completely overloaded
Not so Lua
Impact

- less files (esp fonts)
- simple tree
- zip based distributions
- different solutions for similar problems
- stable for many years due to simplicity
- stand out in font handling
Is this all?
• even I forget what is already there
• there will be more (and less)