Guile
GNU
&
You
hello

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guile co-maintainer
(along with ludovic & neil)
what is guile?

actually not a boring question
"different things to different people"
(a kind of smörgåsbord?)
... a gnu language

philosophically aligned
lgpl v3+
libunistring, gnulib, gmp
bindings for gnu things: tls, gnome stack
gettext, readline
an "in the fold" project
... a scheme implementation

r5rs, part of r6rs
+ modules
+ syntax-case hygienic macros
+ goops, a clos-like object system
+ posix interface
+ unicode
+ ...
... an extension language

bdw gc

very nice c->scheme access

not so much for config files
(days of fvwmrc long gone)
... a lively project

irc: #guile, 15-20 people
active mailing lists
987 commits so far this year
monthly releases
3 maintainers
~7 other active committers
On ~30% of debian systems
16 years old (and counting)
... a language substrate

bespoke vm

compiler

multilingual support:
- repl
- compiler
- tools support (sorta)

native compiler coming (soon?)
... a part of the gnu system

"gnu's not unix != gnu is a unix clone"

the gnu system: a herd, really?
beyond the shell
allows agglutination -- not every project with its own extension mechanism
(demo)
challenges

perception
- among scheme world
- among maintainers
- among the public

but perception != reality
strengths

perception
- multilingual vision, especially penetration (ubiquity)
the gnu brand and network effect
and now, the meat

why are we really here (?)
in a specific, hacking way:
to spread the emacs nature.
to emacsify the gnu system.
so let's start with emacs

we can do elisp better than emacs can. currently about the same speed as elisp bytecode

emacs will benefit from native compilation.
guile: an offering to emacs

threads (native)
ffi
dynamic loading
modules
high-level macros
other languages
goops
datatypes
library bindings
how guile supports elisp

nil
fluids -- dynamic, thread-local variables
optional, rest, kw args
modules
special vm ops
mutability: it's all gnu
the plan

messrs. kraft & raeburn
make it the obvious choice
(no coercion of maintainers)
status

elisp, javascript immature
native compiler, dynamic ffi lacking
guile 2.0: 2 months from now
guile in emacs: 18-30 months from now
the moldy mandate

"guile is the official gnu extension language" - rms, 1993

in 2009, guile (finally / still) merits this distinction
guile, gnu, what about you

use it, hack it, write new apps in it, make more gnu bindings (binutils, bfd, gdb, ...) -- spread the goo.

and, just as importantly...
tell the story.
thanks!

questions please!
(and do stop by #guile.)

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(story a)

in the beginning there was darkness. the prophet spoke, and said, "let there be gnu". and thus was born the gcc, the emacs, the bash, the libc.

and the prophet looked upon it and saw that it was good.
(story b)

but then the prophet saw that these noble beasts would never build a tower without a common language, much less a tower that reached to the heavens.

so, the prophet said, let there be, on the tongues of each beast, a common extension language, that speaks the language of each, and let this language be known as "guile".

and the prophet saw that it was good, and the beasts got back to work on their tower.