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.