

Dynamic Hacking with Guile

Greetings!

Andy Wingo
<http://wingolog.org/>

Guile co-maintainer
(along with Ludovic Courtès)

Goal

Shameless promotion

To inform, and to entertain

Agenda

Brief intro

What are the haps?

Live-hack a twitter-alike

Forward-looking statements

What is it? (1)

The GNU extension language

Implementation of Scheme

Embeddable, great C API

Standalone programs

"Scripting"

What is it? (2)

Bytecode virtual machine

Compiler, and compiler toolkit

Module set: threads, ffi, web,
goops

Fantastic REPL

Much of this is new

What happened in 2010?

Nine 1.9.x releases

* six of which were the last before 2.0 (oops!)

(One 1.8 release)

Awesome new REPL

Debugger on error

Profiler

Tracing and tracepoints

Breakpoints

Source stepping

Dynamic FFI

Bind C libraries without C code

Seatbelts not included

Prompts

Composable, delimited
continuations

catch, throw implemented in
Scheme

More powerful than call/cc

Process abstractions in userspace

Elisp improvements

Clever #nil

* (if #nil "hey" "ho") => "ho"

* (null? #nil) => #t

SoC work from Brian Templeton

Getting closer; needs champion

R6RS support

Imports from elsewhere

LALR parser generator

* PEG SoC work to be merged

SXML, sxml-match

Statistical profiler

Web stack

HTTP, URI parsers and serializers

WSGI-like abstraction for web programs

Now that we have web modules, let's make a CPAN, finally

Misc

Futures: fine-grained parallelism

Code coverage

Letrec* for internal definitions

The coming 2.0

27 developers

3790 changesets

1,127,437 lines added

792,425 removed

Mostly compatible with 1.8

16 February 2011

Peeples

[hack goes here]

The Future

CPAN

Native compilation

2.2, 2.4, ...

Guile & GNU

Unix or the Lisp Machine?

Guile & Emacs

Implement Elisp for Guile
runtime

Allow Scheme (& JS, Lua) in
Emacs

No rewrites

Status

Guile & You

Give it a hack!

Questions?

www.gnu.org/software/guile

wingolog.org/git/skeleton.git

Thanks for listening!