Dynamic Hacking with Guile
Greetings!

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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
Peeple

[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!