

# Swarm Coding

Phil Hagelberg

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# Who am I?

Swarm Coding

Phil Hagelberg

- ▶ Phil Hagelberg (<http://technomancy.us>)
  - ▶ Soli Deo Gloria
  - ▶ Hacker-Errant, Heroku
  - ▶ Second-tallest man in Clojure



# Who am I?

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- ▶ Relevant qualification:
  - ▶ Founded Seajure, Seattle Clojure Group

- ▶ What are we trying to achieve?
  - ▶ Social
  - ▶ Learning (teaching?)

- ▶ The lecture model
  - ▶ What's going in this room here
  - ▶ But not sustainable
  - ▶ Not even a particularly good way of learning

- ▶ The lecture model works if...
  - ▶ Audience is sufficiently alert, caffeinated, etc
  - ▶ Presenter can keep your attention.
    - ▶ good jokes
    - ▶ cat pictures

# Learning

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# Learning by discussion

- ▶ Socratic dialog
- ▶ Discussion among a small group
- ▶ Asking questions, not giving answers



- ▶ Computer Communications
  - ▶ by J.C.R. Licklider and Robert Taylor
  - ▶ Creative communication
    - ▶ distinct from simply data transfer

# Learning by shared models

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- ▶ Computers bring immediacy over distance
- ▶ Computers remove ambiguity

# A REPL process as a shared model

- ▶ Interactive programs
  - ▶ Able to act directly on that substance
  - ▶ Dispensing with intermediate modeling steps
    - ▶ (Modeling still happens in your head)

# The technology

- ▶ SSH as a shared user
- ▶ `tmux attach`
- ▶ `lein new hack-project`
- ▶ Emacs/Vim

# Criteria for a hack project

- ▶ Short, accessible
- ▶ Contrived vs practical (harder, more interesting)
- ▶ Start by doing a fresh project each time

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  - ▶ Push to Github/Clojars/Heroku

# Let's try it out

- ▶ Groups of up to ten
- ▶ Project ideas
  - ▶ Chat log analysis  
<http://www.raynes.me/logs/irc.freenode.net/>
  - ▶ Dependency trees (Clojuresphere data)  
<http://git.io/melange>
  - ▶ Github rankings  
<https://github.com/Raynes/tentacles>
  - ▶ Group web site (members, projects listed)
  - ▶ Games
    - ▶ Mastermind
    - ▶ Tic-tac-toe

# Let's try it out

- ▶ To host:
  - ▶ Create separate “swarm” user
  - ▶ Setup script: <http://git.io/swarmup.sh>
- ▶ To join:
  - ▶ Use the SSH key [http://git.io/id\\_swarm](http://git.io/id_swarm)
  - ▶ `ssh swarm@host.local`
  - ▶ `tmux attach`