REPL-DRIVEN DEVELOPMENT
- CLOJURE'S SUPERPOWER

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WORLD SINGLES NETWORK
WHO AM I?

- World Singles Networks
  - 40+ online dating sites
  - Powered by 105k lines of Clojure
  - In production since Clojure 1.3
- Open Source
  - next.jdbc, clojure.java.jdbc
  - HoneySQL
  - clj-new, depstar
  - Expectations, Readme

- Senior Software Architect
  - World Singles Networks
  - Broadchoice
  - Macromedia/Adobe
- Journey to Clojure
  - Assembler, COBOL, C, C++, Java, CFML(!), Groovy, Scala
  - But lots of Lisp/FP @ uni in the '80s!
REPL-DRIVEN DEVELOPMENT

• What do we mean by this?
  • Lots of languages have a REPL, right?

• All Clojure developers already use the REPL, right?

• "I am baffled when people type things into the REPL"
  • Stuart Halloway - REPL-Driven Development (Chicago Clojure, 2017)
SOME CAVEATS ABOUT THIS TALK

• I'll be live coding so we can expect things to go wrong...

• I use the latest Clojure CLI tools (1.10.1.763) and my dot-clojure repo/aliases

• I use Atom + Chlorine VS Code + Clover + Socket REPL

• All of this is possible with lein, nREPL, emacs/vi/cursive
SOME CAVEATS ABOUT THIS TALK

• I use tools.deps.alpha's add-lib3 branch to add dependencies to a running app
  • With Leiningen, you can use Pomegranate to do the same thing

• I use Reveal to supplement my editor/REPL for data visualization etc
  • It's optional – but there's also Portal (browser-based) and REBL (Cognitect)

• I want this to be interactive – interrupt me and ask as many questions as you want!
WHAT WILL WE BUILD?

- We'll build a small web application from scratch

- We'll start by creating a brand new, minimal project (app)

- We'll start a REPL

- We'll add code and dependencies and tests and see how far we can get in an hour!
TIME TO START THE REPL
WHAT DID WE LEARN?

• Don't type into the REPL - use "Rich Comment Forms" in your code

• Being effective with a REPL requires...
  • no magic
  • no special refresh/restart tooling
  • only a few commands/hotkeys

• Be like Rich Hickey and Stuart Halloway!
LINKS AND RESOURCES

• My dot-clojure & vscode-clover-setup (along with clj-new etc):
  • https://github.com/seancorfield

• Clojure CLI
  • Basic Documentation: https://clojure.org/guides/deps_and_cli
  • Reference Documentation: https://clojure.org/reference/deps_and_cli
  • Releases: https://clojure.org/releases/tools
  • Community Tools: https://github.com/clojure/tools.deps.alpha/wiki/Tools
LINKS AND RESOURCES

• REPL tutorial on clojure.org:
  • https://clojure.org/guides/repl/enhancing_your_repl_workflow
  • In particular the Writing REPL-Friendly Programs section near the end!
• Stuart Halloway – RDD talk – https://vimeo.com/223309989
• Eric Normand – RDD course (absolutely worth a month's subscription!):
  • https://purelyfunctional.tv/courses/repl-driven-development-in-clojure/
CONTACTING ME

• I'm seancorfield everywhere: github, slack, twitter, zulip... even facebook (non-tech!)

• I blog (occasionally) at An Architect's View – https://corfield.org
  • Powered by Cryogen which is powered by Clojure!