

TESTING PROPERTIES WITH QUICKCHECK

@steshaw

“CHOOSE YOUR OWN ADVENTURE”

Lightning talk, [Brisbane Software Testers](#)

QUICK OVERVIEW

- Test properties of your programs.
- Randomised test inputs.

>_ Demo (basics)

APPEAL TO AUTHORITY

*Better than unit tests—Michael Nygard
(2013)*

TESTING UI

- Choose your own adventure.
- randomised user actions.

>_ Demo (arbitrary)

TESTING CONCURRENT SYSTEMS

... or ...

- Concurrent
- Testing
- Systems

:P

CONCURRENT SYSTEMS (2)

- Google “[Erlang QuviQ](#)” to find reports and talks.
- Distributed Systems are Concurrency Systems that span multiple nodes.
 - i.e. these ideas apply to Distributed Systems.
 - i.e. web

REFERENCES

- [Original QuickCheck paper from 2000—Claessen and Hughes \(PDF\)](#)
- [QuickCheck homepage and manual](#)
- [Testing and quality assurance—Chapter 11 of Real World Haskell](#)
- [Introduction to QuickCheck on Haskell Wiki](#)

REFERENCES (2)

TESTING CONCURRENT SYSTEMS

- Erlang QuickCheck
- Testing Erlang Concurrency with QuickCheck (PDF)
- Finding Race Conditions in Erlang with QuickCheck and PULSE (PDF)

REFERENCES (3)

TESTING DISTRIBUTED SYSTEMS

- [Testing Telecoms Software with Quviq QuickCheck \(PDF\)](#)
- [Modeling eventually consistent databases with QuickCheck \(Video\)](#), Jon Meredith, Basho.

SEE ALSO

- [SmallCheck](#) for exhaustive checking of your properties (rather than QuickCheck style random samples)
- [Comparison of QuickCheck and SmallCheck](#)