








SELENIUM UI TESTING

Rick Hanton, SkyTouch Technology

Video of this presentation is at <https://youtu.be/Y6OCWH29TdU>

WHAT IS SELENIUM WEBDRIVER?

- Functional Automated Test Tool for Web Applications
- Open source!

- Supports Popular Languages:     

- Supports Popular Browsers:    

- Extensible, can use tools to run multiple tests at once

SELENIUM HISTORY



ThoughtWorks

- Jason Huggins and ThoughtWorks Inc. team developed it in 2004
- They joked about HP Mercury Tools being an issue, so said you could “cure” the mercury problem using selenium supplements.
- Original tool simply sent js commands to the browser.
- Google was a big early user, where Simon Stewart created a project called WebDriver to solve limitations in the product.
- Selenium & WebDriver merged in 2008 (Selenium 2.0), now separating somewhat

TWO PARTS

- **Selenium IDE**

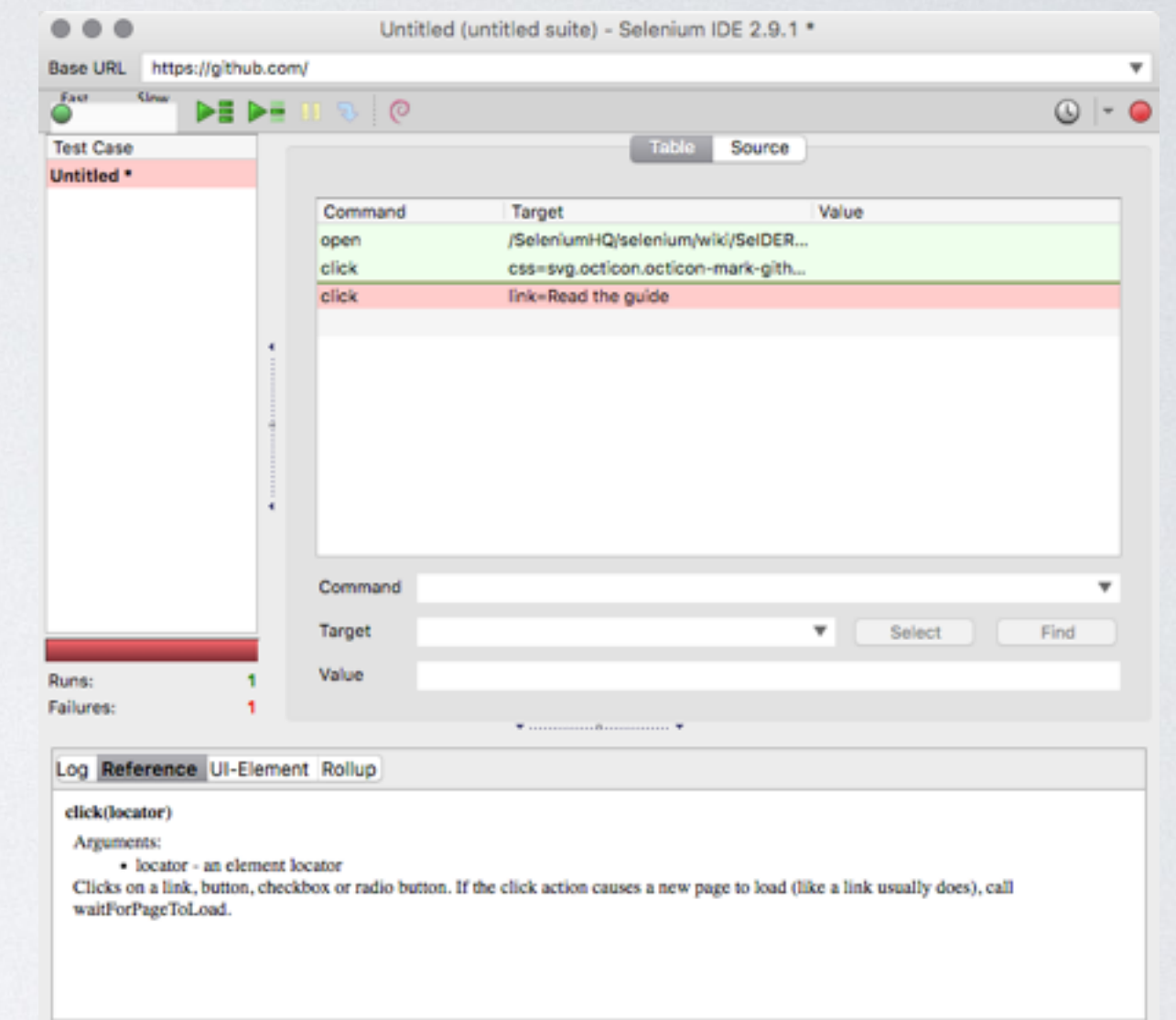
- In-browser, non-coder friendly UI test automation engine

- Firefox-only

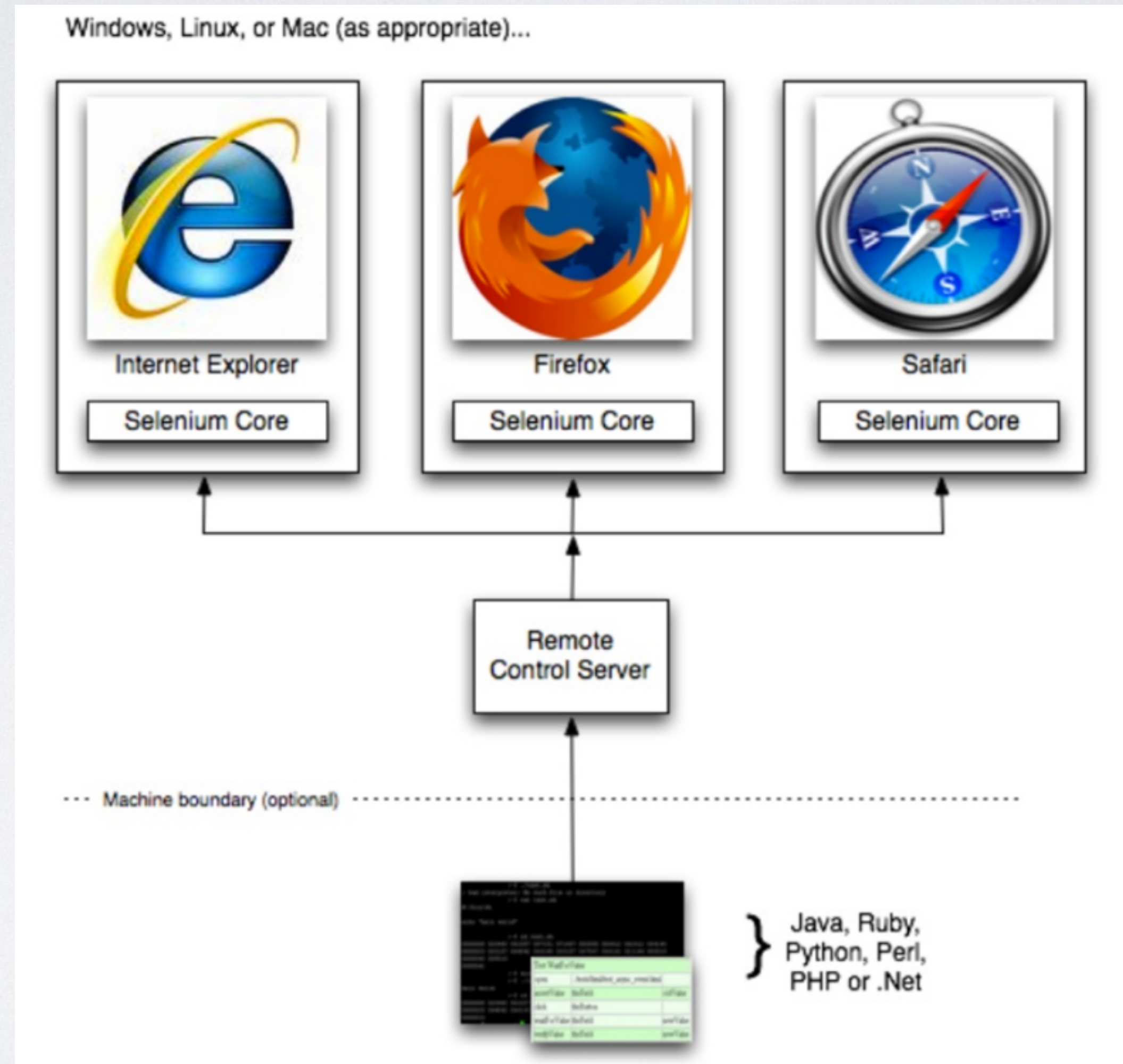


- **Selenium WebDriver**

- Libraries for coding languages that use WebDriver to control browser
- More maintainable, business-friendly



SELENIUM RC (REMOTE CONTROL)



GOOD SELENIUM DESIGN PRINCIPLES

- Use the page-object model to logically separate data, pages, services
- Create robust reusable services that are called by test code
- Create new state each time if possible, don't assume current environment state will match the state the last time the test ran
- Spend as little time possible creating preconditions
- Structure code to support Selenium testing

EXAMPLE TIME: TESTING STEPS

1. Go to reddit.com
2. Log in using credentials
3. Submit a specified new post (tester specified url, title, subreddit).
4. Search for the new post.
5. Verify title and url are correct.

WEBDRIVER DEMO

Code at <https://github.com/hantonr/selenium-testng/>

WHY USE CUCUMBER BDD?

- Cucumber + Selenium allows for smart Behavior Driven Development progression
- Can separate Selenium services written by devs from tests written by non-technical QA (more thorough testing = better)
- English-language testing makes communication easy:

Story: Returns go to stock

As a store owner

In order to keep track of stock

I want to add items back to stock when they're returned.

Scenario I: Refunded items should be returned to stock

Given that a customer previously bought a black sweater from me

And I have three black sweaters in stock.

When he returns the black sweater for a refund

Then I should have four black sweaters in stock.

CUCUMBER + SELENIUM DEMO

Code at <https://github.com/hantonr/selenium-cucumber/>

QUESTIONS?