

# BDD for Mobile using Calabash

FOSDEM 2013, Testing and Automation  
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# Mobile Challenges



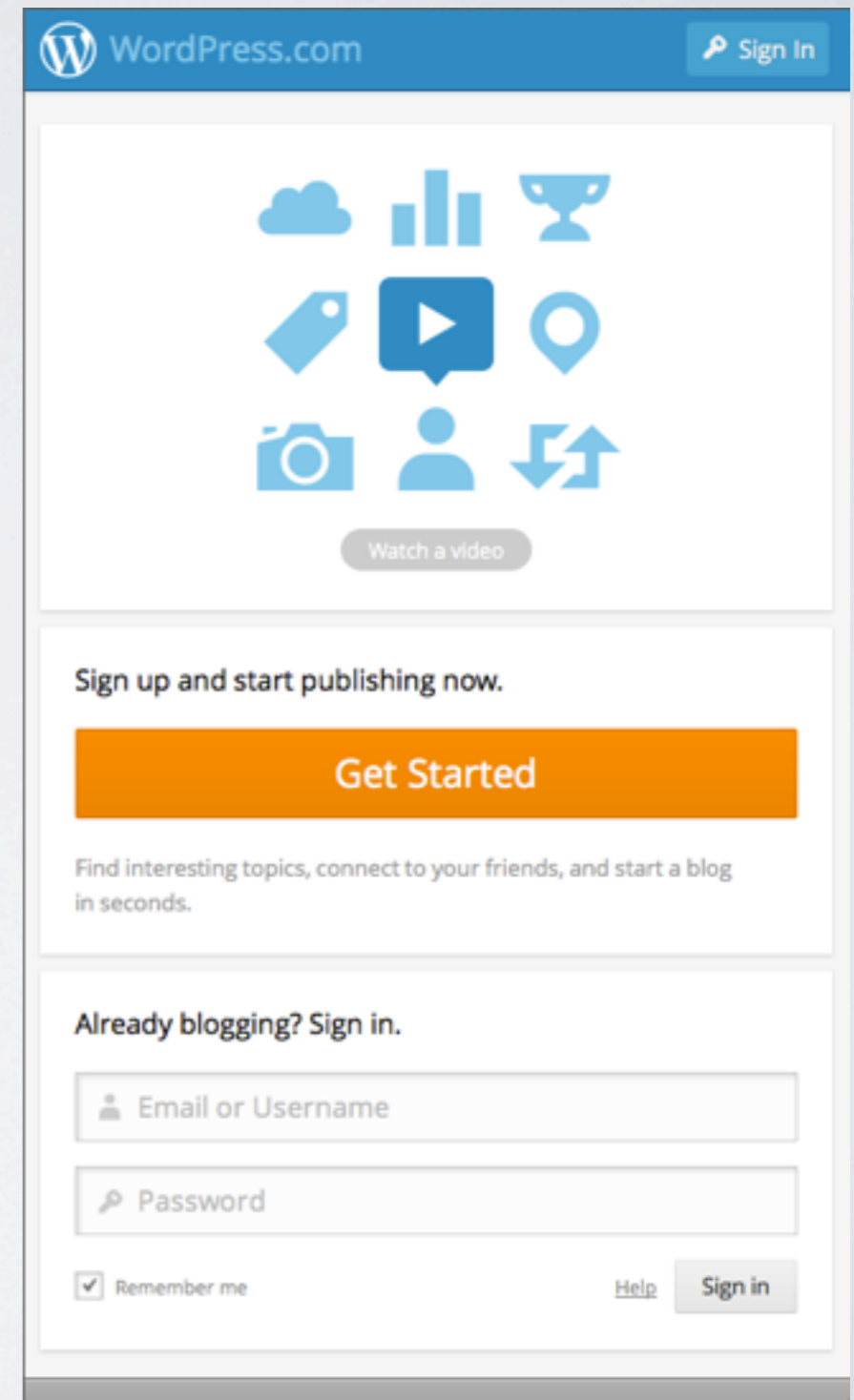
# Mobile Challenges

A screenshot of a mobile product listing page. It features six devices arranged in two rows. Each device has a 'Buy' button with a dropdown arrow and a 'Compare' button with a checkbox. The devices shown are:

- Excite™ 7.7 Tablet (top left)
- Kyocera URBANO PROGRESSO (top middle)
- Xperia™ P (top right)
- Xperia™ U (bottom left)
- SKY VEGA Racer2 (IM-A830K) (bottom middle)
- SKY VEGA Racer2 (IM-A830L) (bottom right)

What is this?

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# Theme: Cross-platform



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- When developing **the same app** (or *similar* apps) for **multiple platforms**, how can we
  - minimize cost of spec and test maintenance?
  - ensure quality and consistency across platforms?

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- When developing **the same app** (or *similar* apps) for **multiple platforms**, how can we
  - minimize cost of spec and test maintenance?
  - ensure quality and consistency across platforms?
- Today's Agenda:
  - Briefly introduce Calabash
  - Demo: Cross-platform BDD for iOS and Android using Calabash.



# Automated Testing Philosophy



# Automated Testing Philosophy



- We recognize value in BDD (and TDD)
  - Develop business readable specifications (by example).
    - Shared language: dev, QA, management, business, ...
    - Improves communication, monitoring and transparency.
  - Specifications executable as automated acceptance tests.

# Example

**Feature: Login**

**As a user I'll be able to log in and manage my WordPress blogs.**

**Scenario: Invalid login**

**Given I am about to login**

**When I enter invalid credentials**

**Then I am presented with an error stating to try again**

**Scenario: Login with wordpress.com credentials**

**...**

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## Scenario: Invalid login

Given I am about to login

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Then I am presented with an error stating to try again

## Scenario: Login with wordpress.com credentials

...



**ERROR:** Invalid email or username. [Lost your password?](#)  
**ERROR:** Cookies are blocked or not supported by your browser. You must [enable cookies](#) to use WordPress.

Email or Username

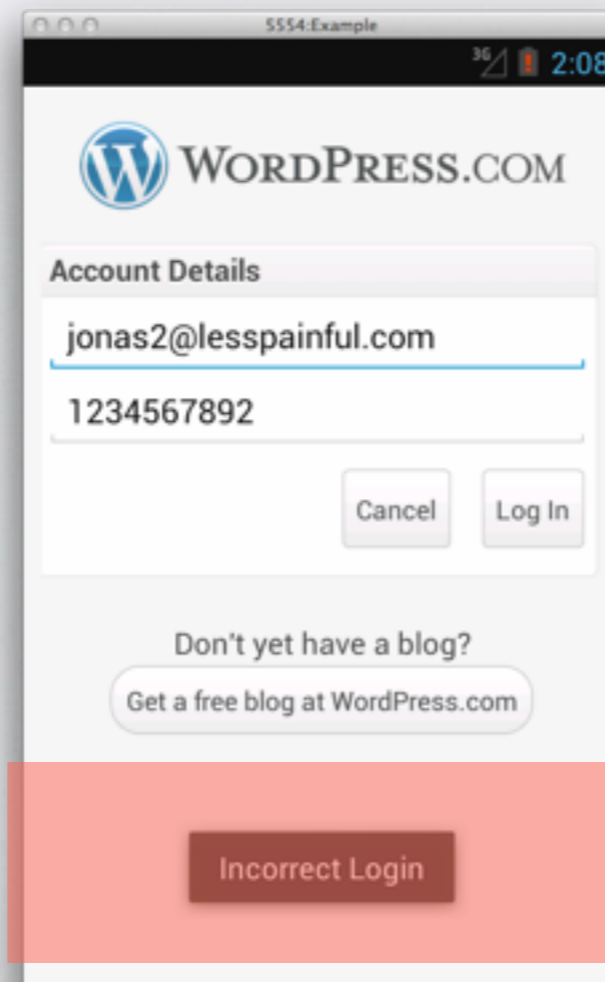
Password

Remember Me

Log In

[Register](#) | [Lost your password?](#)

[← Back to WordPress.com](#)



# What is Calabash?



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- Tool for BDD-style acceptance testing, consisting of two projects:
  - Calabash Android: <https://github.com/calabash/calabash-android>
  - Calabash iOS: <https://github.com/calabash/calabash-ios>

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  - Calabash Android: <https://github.com/calabash/calabash-android>
  - Calabash iOS: <https://github.com/calabash/calabash-ios>
- Core development by LessPainful, but Open-Source and Free (Eclipse Public License)
- Written in Objective C, Java and Ruby (and Clojure)
  - Test written in Ruby but other languages are easy (e.g. Java/JVM).



# High-level Architecture

Host computer

Device, Emulator or Simulator

Calabash Clients

Calabash  
Android

Calabash  
iOS

Calabash  
JVM

...

Your App

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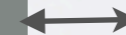
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JVM

...

Device, Emulator or Simulator

Calabash  
Server

Your App



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Calabash  
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...

Calabash  
Server

Your App



JSON  
over  
HTTP

# Calabash Features



- Native and hybrid apps for Android and iOS
- BDD via the Cucumber tool.
- Supports Cross-platform testing.
- Runs on physical devices as well as simulators/emulators
- Value-added options via LessPainful (e.g. device labs, training, support...)



# Mobile Test Lab

[www.lesspainful.com](http://www.lesspainful.com)



# Demo



- Rest of this talk will be live demo and Q&A :)
- Demo using the open-source WordPress app (iOS and Android)
  - Hybrid app (lots of blog content displayed in web views)
  - Cross-platform: Similar functionality on both platforms (different UIs). Data consistency across-platforms?
  - Gestures like swipe, tap, etc...



# Questions?



Making App Testing  
Less Painful

<http://www.lesspainful.com>