

An Introduction to Mobile Testing – Stephen Janaway

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Course Synopsis

If you are just starting on your journey into the rapidly growing area of mobile application or website testing it can seem a daunting prospect. While many existing testing skills are transferable, there is a lot of new information and knowledge to learn and a lot of pitfalls to avoid. In this course you will pick up useful hints and tips, learnt from within the industry, on areas such as:

- How software testing for mobile devices differs from the desktop world.
- Understanding your mobile user.
- How to form a successful mobile testing strategy.
- How the mobile industry and technology impacts software testing.
- Hints and tips on both manual and automated techniques.

This practical, hands-on, course will benefit not only those who are starting to test mobile, but also those that have been testing for a while, and want to improve their skills and learn more. You probably know how to use a mobile device so come along and learn how to test one!

One Day Course Syllabus

This syllabus can be tailored to the individual audience, and can also be shortened or lengthened as required by adding or removing certain practical exercises.

Prerequisites

- Everyone brings a mobile device, preferably a smartphone. OS is not important, in fact the more variety the better.
- Venue has Wi-Fi and cellular coverage.
- Ideally some areas around the venue have less than ideal cellular coverage (useful for exercise 3).
- Access to a cloud-based mobile testing service such as Device Anywhere or Perfecto Mobile (fee to be factored into course cost).
- Participants have access to mind-mapping software or flip-charts and pens.
- Participants have Google Chrome version 32 or above installed.

Morning

- Welcome and introductions.
- What device do you have any why ☺
- What is mobile and why test on mobile:
 - The current state of the mobile world, including key players, technologies and how this affects how to test for mobile.
 - Key demographics, usage patterns and country specifics.
 - Feature phones vs. smartphone
 - Mobile phones vs. phablets vs. tablets

- o Native app vs. mobile web
- o Networks and wireless connections
- o How users react when confronted with poor quality and why that is different on mobile
- Exercise 1 – Mind-mapping a mobile application
 - o The group are asked to think of what areas they would test if asked to test the camera of a mobile device and produce a mind-map to feedback to the class.
 - o Purpose – to get the class thinking about mobile, and to show that mobile devices are more complicated than they at first seem.
- Break
- Testing on mobile:
 - o Different levels of testing
 - o Mobile payment and e-commerce
 - o Functional mobile testing
 - o What to look for
 - o The differences to desktop
 - o UI
 - o Gestures and Interactions
 - o Similarity to desktop
- Exercise 2 – The Differences Between Devices and OS's
 - o Get the class to explore their devices in small groups, in order to identify the differences in the OS's they use (hopefully not everyone brings iPhones ☺).
 - o Have each group feedback how they feel the OS would impact the way they would test an application or website.
- Lunch

Afternoon

- The Specifics of Mobile Testing:
 - o Sapient vs. Automated
 - o UX Challenges and testing impact
 - o Non-functional:
 - Security
 - Performance
 - Energy usage/ power consumption
 - Load
 - Network coverage
 - Accessibility
 - OS updates
- Submission to Apps Stores

- Getting out of the office
 - Realistic use cases
 - Network switching
 - Overloaded networks
 - Drive and walk testing

- Exercise 3 (including break) - Real life testing challenge
 - Get the class testing a real application (tbd which one and can depend on the devices the class bring), in and around the venue.
 - The intention is to get the class to find issues that are related to what they have learnt, particularly around getting out of the office.
 - Prize for the best bug found (as voted for by the class).

- Automation:
 - The challenge with mobile
 - Hints and tips
 - Tools and techniques
 - Why simulators are not enough

- Mobile test strategy:
 - Choosing devices
 - Choosing what to target
 - Considering the user
 - Test data
 - When to use simulators and when not to
 - Using cloud based solutions

- Wrap up

Additional Exercises and Areas

These can replace syllabus areas above or given in addition on a second day.

- Exercise 4 – Using cloud based services
 - Get the class to experience testing using a cloud based service, primarily in order to show them that these are not always the best solution.
 - A chance to practice the skills learnt during the day.

- Exercise 5 – Using the Chrome Developer Tools for mobile website testing
 - Get the class to experience testing using the Chrome Developer Tools.
 - A chance to practice the skills learnt during the day.

- Exercise 6 - Using the Genymotion Android emulator
 - Installation
 - Setup

- Typical use cases.
- Setting up a mobile test lab:
 - Options
 - Hardware required
 - Hints and tips

About Me

Stephen Janaway has been involved with software testing for a little over 15 years, starting as a Test Engineer and then working in various Test Management roles for a variety of companies. He's worked for major device manufacturer such as Nokia, Ericsson and Motorola, as well as advising a number of mobile application developers on test and release strategies.