Mobile Testing – That's Just a Smaller Screen, Right?

Stephen Janaway

Net-a-Porter Group

Who am I?
Stephen Janaway

- 13 years experience in mobile software testing.
- Software testing and test management.
- Main focus on the mobile device and applications area.
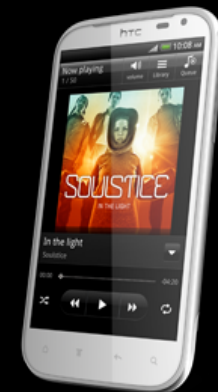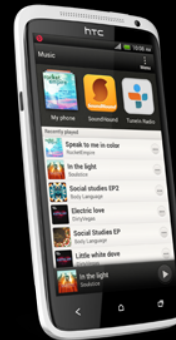- Have worked for companies such as Ericsson, Motorola and Nokia.
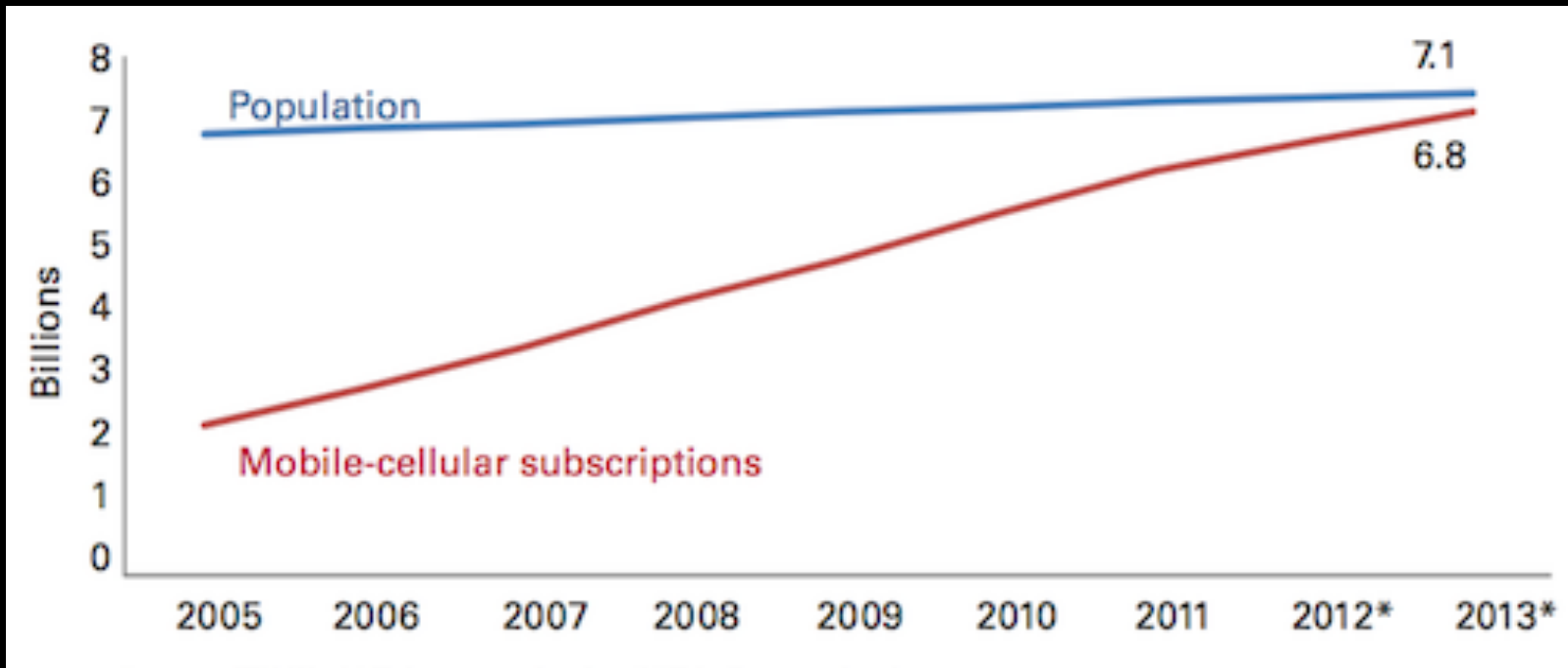
www.stephenjanaway.co.uk   @stephenjanaway

This Presentation

- Why mobile testing?

- What is mobile testing?

- Hints, tips and techniques.

- Why get involved?

So Why Mobile?

The mobile market is huge

Worldwide Mobile Phone Sales to End Users by Vendor in 2013 (Thousands of Units)

Company	2013 Units	2013 Market Share (%)	2012 Units	2012 Market Share (%)
Samsung	444,444.2	24.6	384,631.2	22.0
Nokia	250,793.1	13.9	333,938.0	19.1
Apple	150,785.9	8.3	130,133.2	7.5
LG Electronics	69,024.5	3.8	58,015.9	3.3
ZTE	59,898.8	3.3	67,344.4	3.9
Huawei	53,295.1	2.9	47,288.3	2.7
TCL Communication	49,531.3	2.7	37,176.6	2.1
Lenovo	45,284.7	2.5	28,151.4	1.6
Sony Mobile Communications	37,595.7	2.1	31,394.2	1.8
Yulong	32,601.4	1.8	18,557.5	1.1
Others	613,710.0	34.0	609,544.9	34.9
Total	**1,806,964.7**	**100.0**	**1,746,175.6**	**100.0**

Source: Gartner (February 2014)

So Why Mobile?

Mobile Phones Account for 17% of Global Web Usage
Percentage of page views coming from mobile devices*

■ July 2012 ■ July 2013

9.4% 15.2%
North America

5.9% 9.7%
Europe

18.8% 26.6%
Asia

11.1% 17.4%
Worldwide

3.2% 6.8%
South America

11.3% 23.7%
Africa

8.0% 14.6%
Oceania

* StatCounter defines mobile as a pocket-sized computing device, excluding tablets
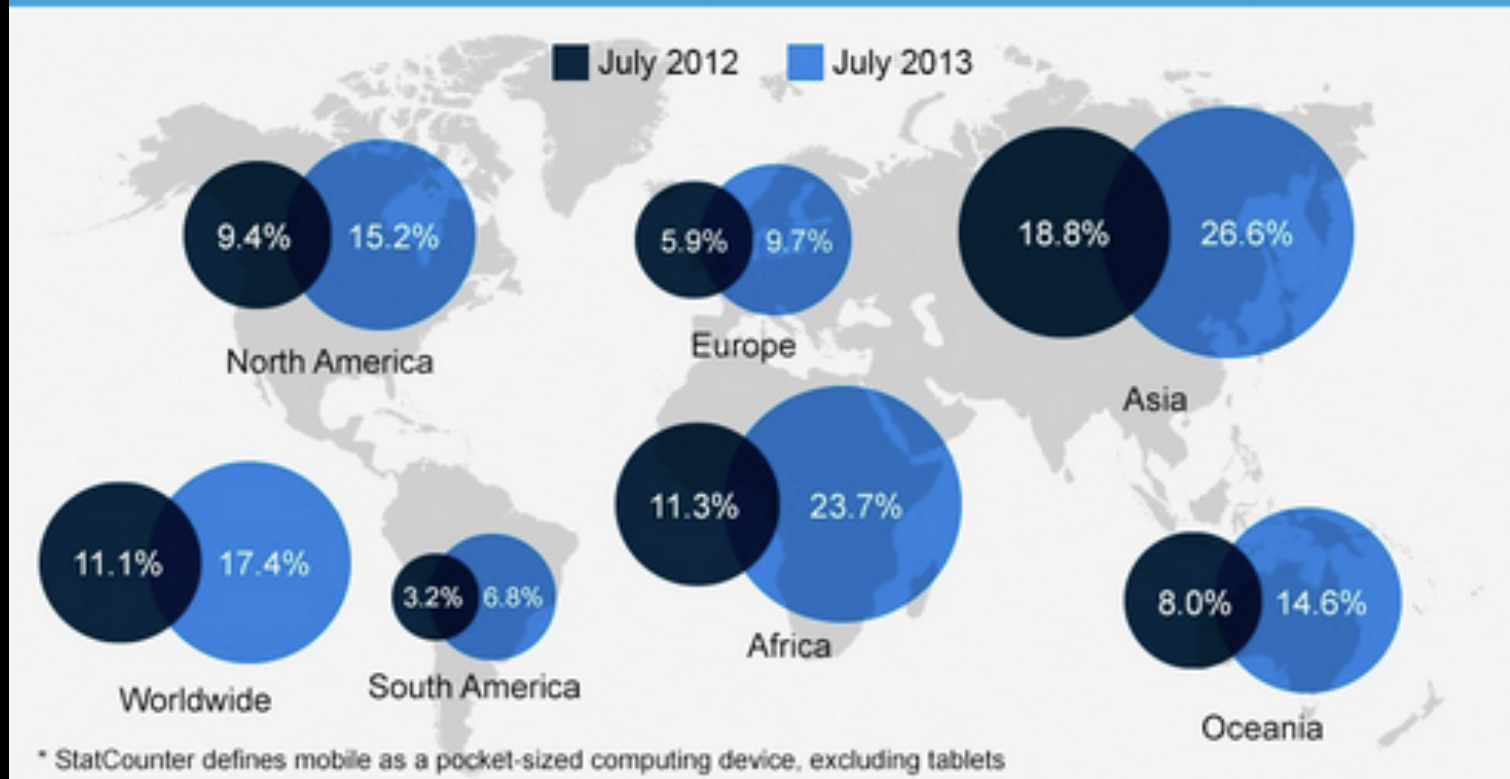
Mobile devices are

- Smart Phones
- Feature Phones
- Tablets
- E-readers
- Big screens. small screens. touch screens and keypads.
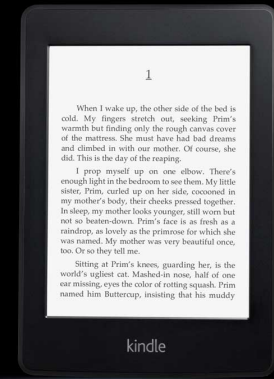
Mobile devices are much more

- Alarm Clocks
- Maps
- Link to loved ones
- Hand held shops
- Tickets
- Music Players
- Books
- Games Players
- Cameras
- ……

- These are key experiences. Imagine if they did not work?

My alarm didn't go off…

NOKIA

I'm lost

NOKIA

Quality is not currently great

- Many applications launch un-tested.
- Phones launch with serious issues (remember the iPhone 4 death grip).
- Android has security/ malware issues.

- Users tolerate this....but for how long?

- How can we improve this?

Different Sorts of Testing

- Hardware level:

- Protocol/ Air Interface:

- Applications

Mobile app market to be worth $27 billion this year

BY: DUSAN BELIC, INTOMOBILE
FRIDAY, JUNE 28TH, 2013 AT 5:47 AM

Native or Web?

- Native app:
  - Specifically designed to run on a device.
  - Runs on device OS.
  - Testing needs to include download/ upgrade/ uninstall.
  - Typically needs to be adapted for different devices.

- Mobile website:
  - All or some parts of the software are downloaded from the Web each time it is run.
  - Usually accessible from all Web-capable mobile devices.
  - HTML5 makes it increasingly difficult to separate web apps from native apps.
  - Testing needs to include different mobile browsers.

Interactions

- While your application runs, the phone
  - Talking to the network
  - Working out where you are
  - Maybe receiving calls, texts, Facebook and Twitter updates.

- What happens when you have your application running, and then get a call, and a text, whilst uploading video to YouTube? Test for it and find out.
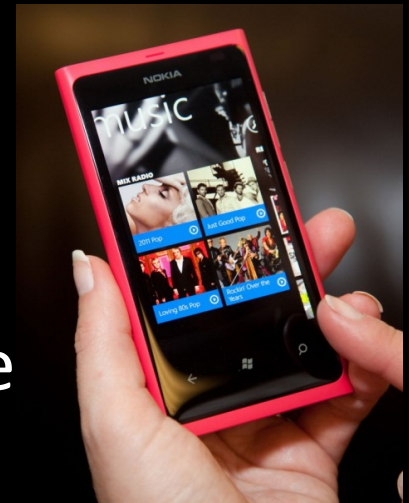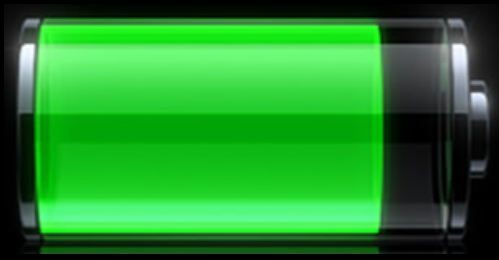
Performance

- Limited memory.
- Limited processing capacity.

- Test for memory leaks and general performance of the operating system and applications.
- Think of battery life!!!
- Think of how the application works when network performance is poor or on different speeds (2G/ 3G/ LTE/ Wifi).

Apps Stores

- Different stores have different criteria.

- One estimate is that 70% of applications are submitted to apps stores without any formal testing have been conducted.

Home > News > 400,000 apps in the App Store have never been downloaded says report

400,000 apps in the App Store have never been downloaded says report

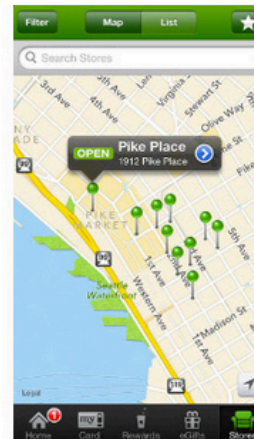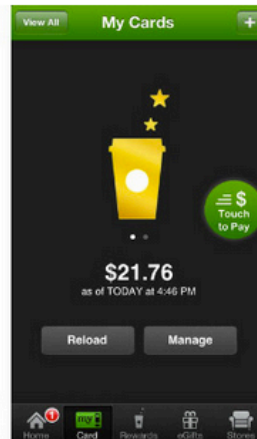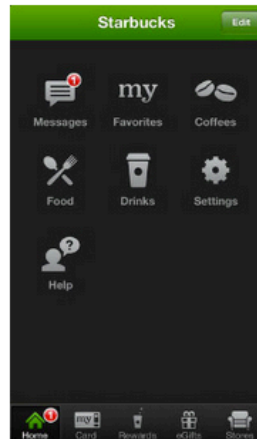Posted: 02 Aug 2012, 09:01, by Alan F.

Categories: Apple + Apps +

Security
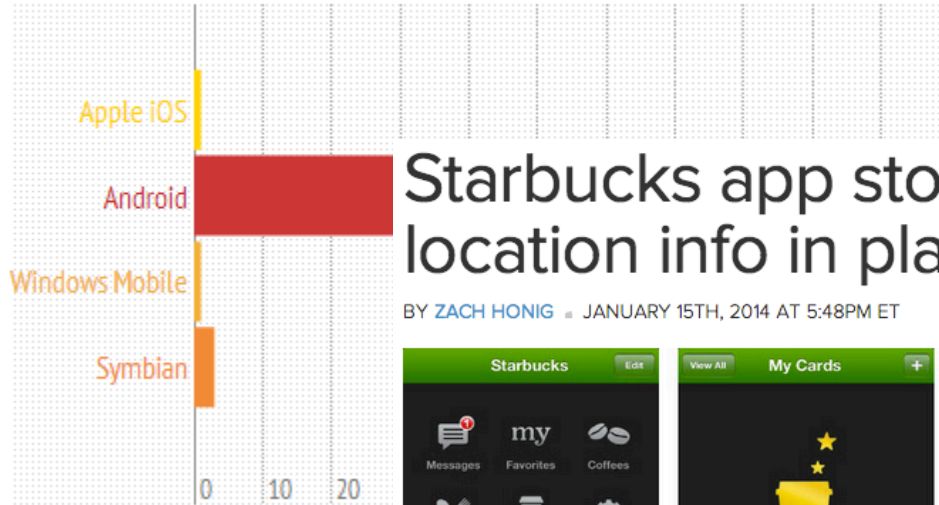
Usability Matters

- Test on a panel of real users.

- Usability is more important in the mobile world:
  - Smaller screen.
  - More difficult to interact with and typically used one handed.

- Typical areas to focus upon are:
  - How easy is it to use the application? Do user 'just get it'?
  - How is the look and feel?
  - Does the application or device feel fast?
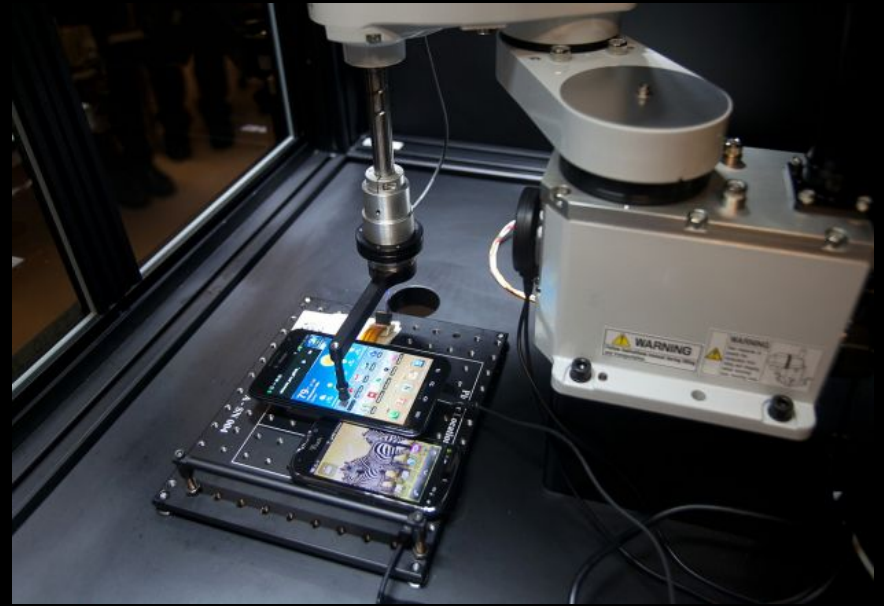
Strategy - Fragmentation
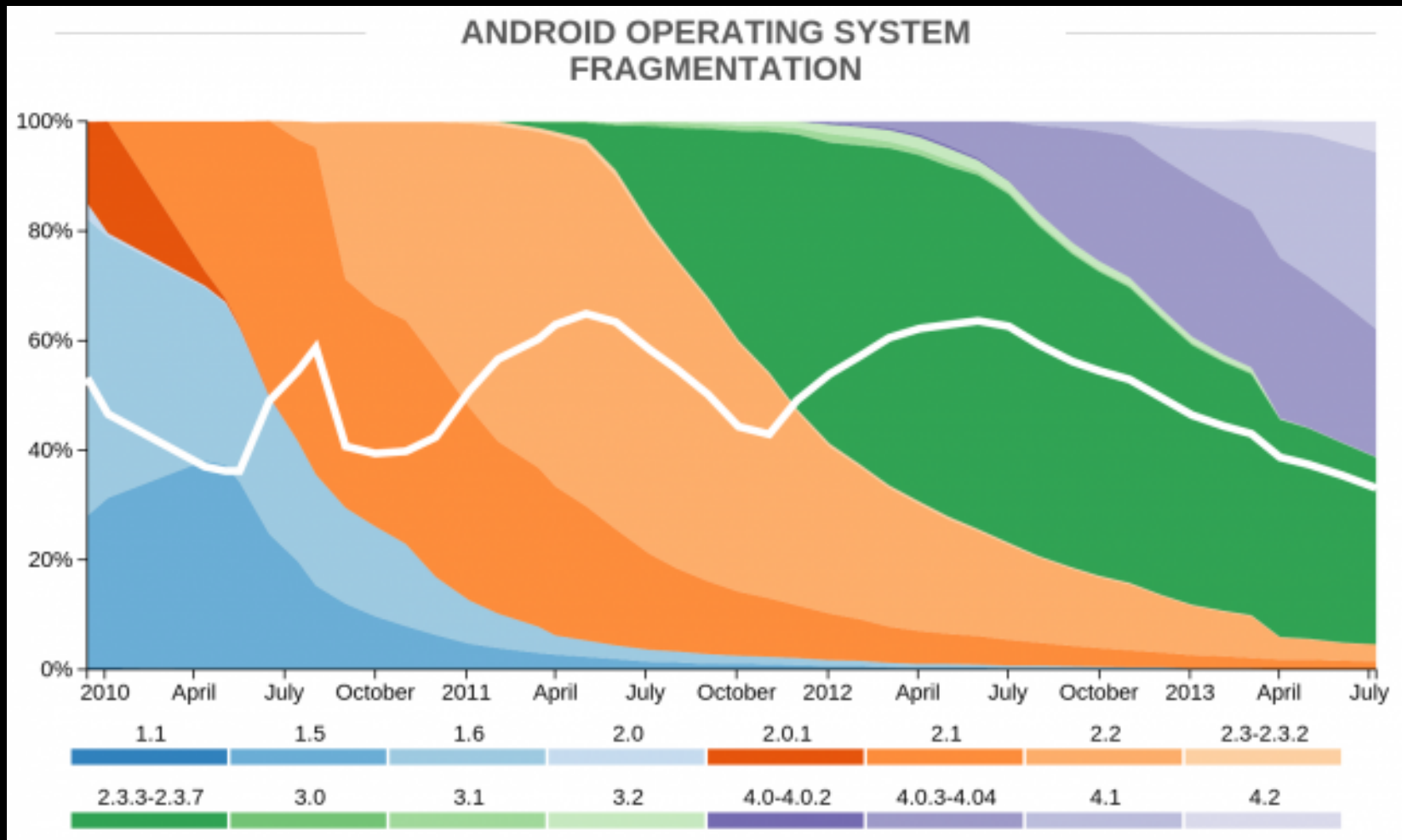
Where do I get all the devices from?

- Don't use them at all – simulators or user agents.
- Buy them.
- Rent them.
- Use a cloud based service (Perfecto Mobile, DeviceAnywhere).

Automation – the answer?

- Yes and No ☺
- More difficult on mobiles.

- Many options:
  - Appium
  - iOS Driver
  - Robotium
  - Gorilla Logic (Monkey Talk)
  - Touch Test
  - Bespoke solutions….

So……why get involved?

So...

- Mobile is huge.
- Users are more emotionally attached to their phones than they are to their PCs.
- Testing applications is the easiest route into the industry.
- A mobile test strategy should not merely be a copy of a desktop test strategy.

- "Be proud, your work will soon be in the hands of millions".

Questions?

Stephen Janaway

www.stephenjanaway.co.uk

@stephenjanaway