

Compatibility Testing for Mobile Apps and Websites

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a topic from
Mobile Testing
course



This is a sample of class
Mobile Testing: Manual and Automated

Next full course:

AVAILABLE

QUEST 2016, Chicago, IL
April 18, 2016, 8:30 am - 4:30 pm

See

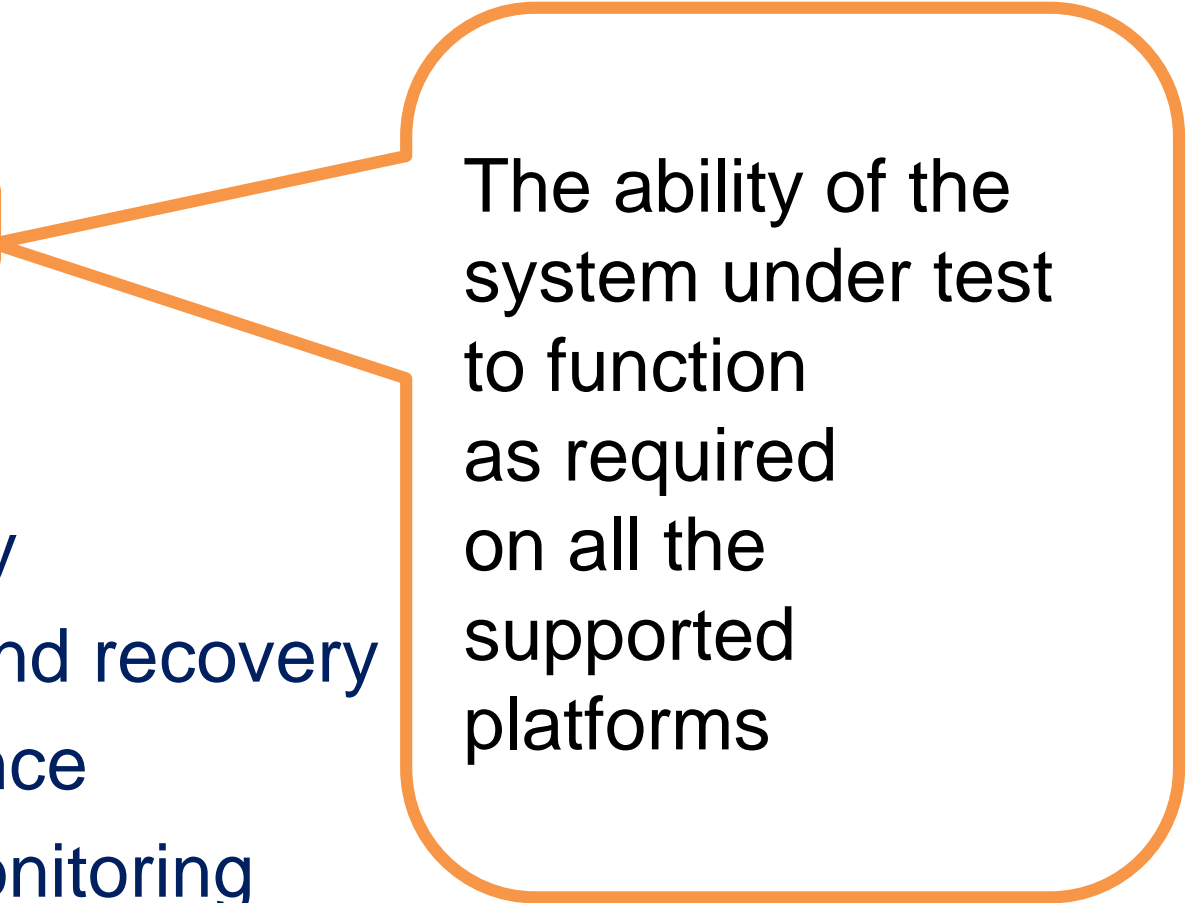
<http://qaiquest.org/2016/sessions/full-day-class-mobile-testing-manual-and-automated/>
for details

Contents

- Compatibility Testing – a refresher
- Compatibility factors
- How to plan compatibility tests for mobile platforms

Compatibility Testing

- Functionality
- Performance
- **Compatibility**
- Usability
- Security
- Interoperability
- Survivability and recovery
- User acceptance
- Production monitoring



The ability of the system under test to function as required on all the supported platforms

Compatibility Testing - Examples

- Web applications
 - Browsers
 - IE 9 / 10 / 11
 - Firefox 2, 3
 - Google Chrome
 - Safari
 - OS
 - Windows 7 / 8 / 8.1 + Service Packs
 - Mac OS
 - iOS 7
 - Android OSs



Compatibility Factors

- Hardware
 - Apple: iPhone versions & iPad versions
 - Android: device and tablet versions
- OS
 - Apple: iOS versions
 - Android: OS flavors and versions
- Carrier compatibility

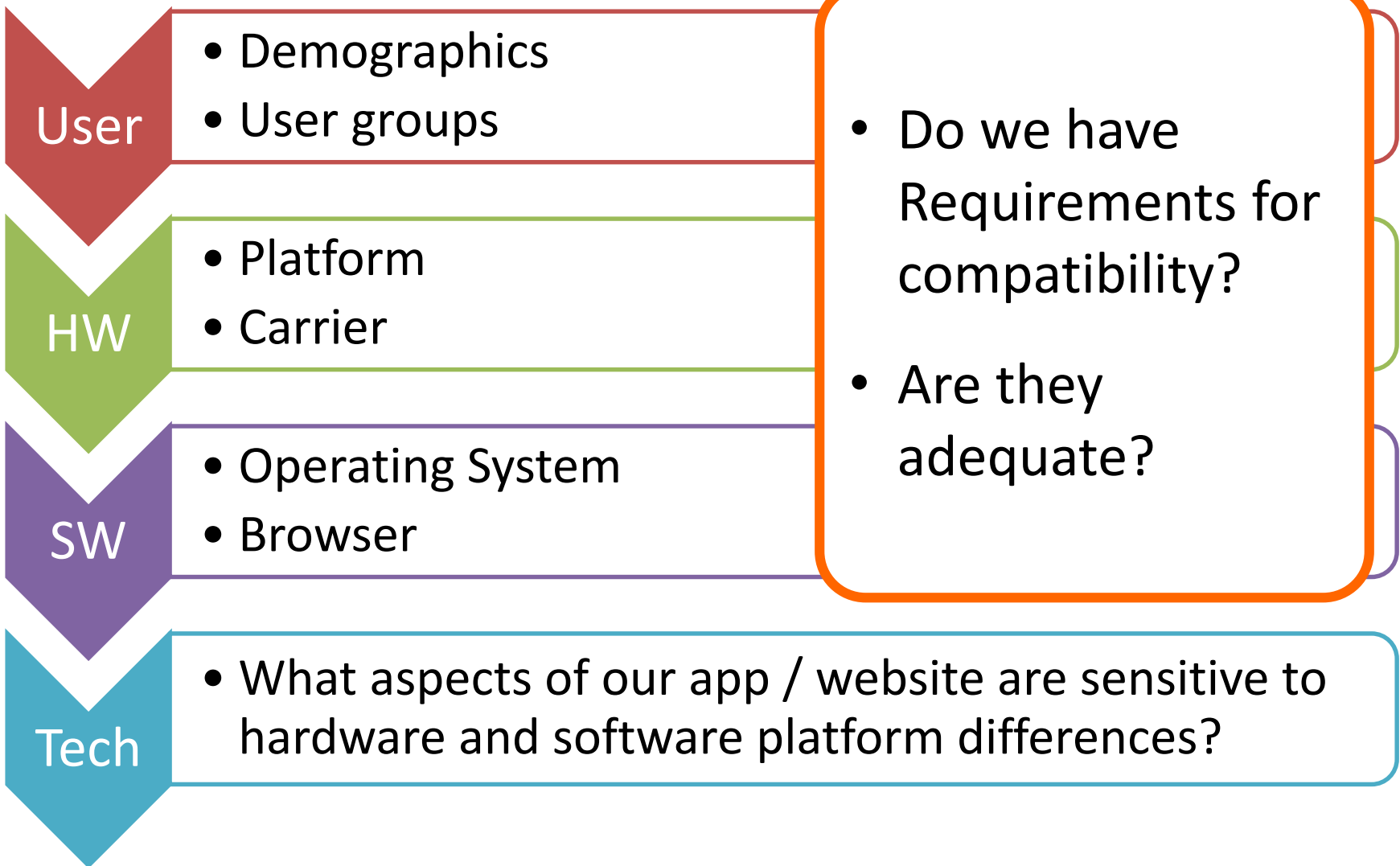


Compatibility questions

- How do we know on **which devices** we should run the tests?
- How do we know **what tests** should we execute on which devices / carriers?
- What should the app do when installed on an **unsupported platform**?



Compatibility Analysis



Compatibility Analysis : Demographics

- Who is using the app / website?
 - General public
 - Where (US / Canada / EU / India / China / other)
 - Alphabets
 - Measures
 - Specific groups
 - Businessmen
 - Doctors
 - Not-at-your-desk use
 - Academics
 - Mac integration
 - Traveling public
 - Connectivity
 - College students
 - Seniors
 - Font size

Compatibility Analysis : Hardware

- Type
 - Smartphone
 - Tablet
 - Other
- Manufacturer
 - Android manufacturers tend to over-customize things...
- Display
 - Size
 - Resolution
- Special hardware
 - Camera utilization
 - Barcode scanning
 - Credit card scanning
 - Location (GPS / Galileo / GLONASS / BeiDou / ...)
 - ...

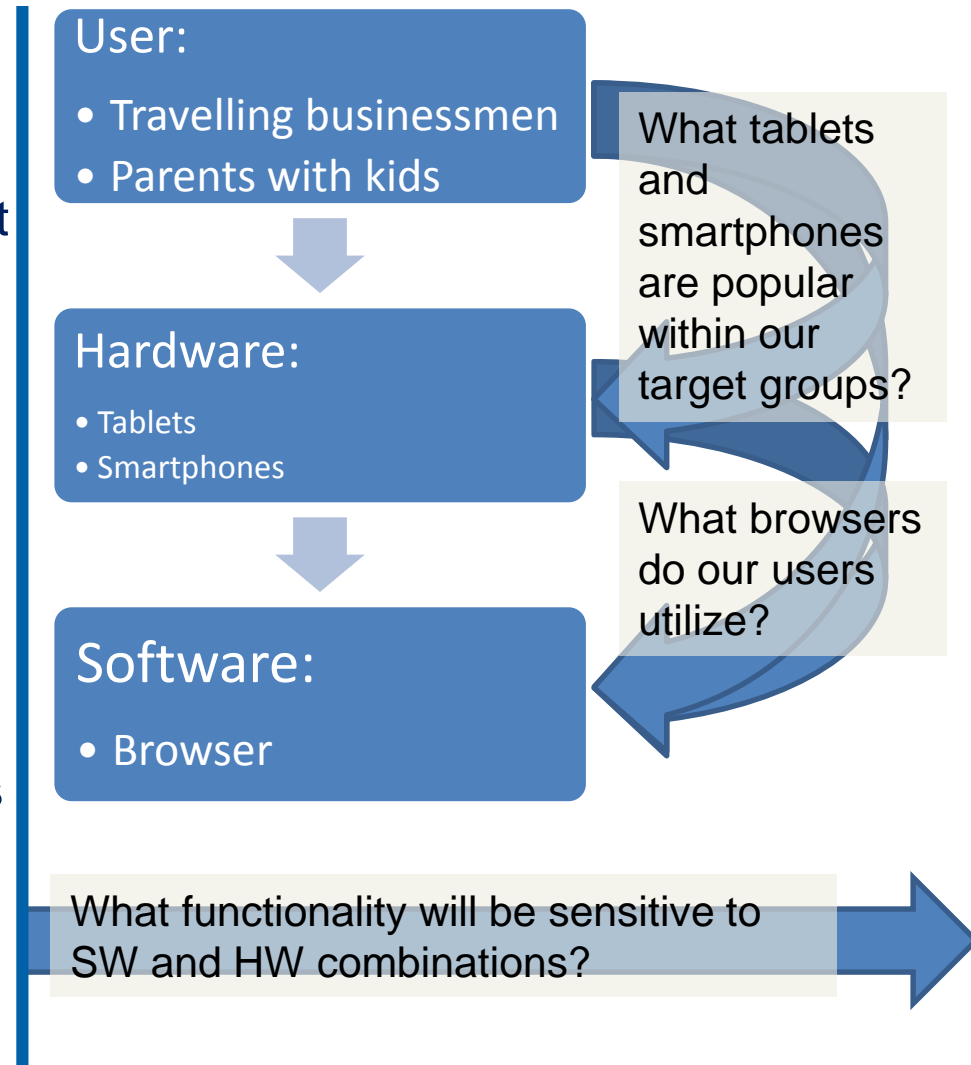
Compatibility Analysis : Software

- Operating System
 - iOS
 - Version
 - Android
 - Flavor
 - Version
 - Manufacturer's customization
 - Jailbreak / Root
 - Should work on jailbroken / rooted devices?
- Browser
 - Standard
 - Installed

Compatibility Analysis : Technology

Example: FindDoc

- A *mobile website* that enables users to find physicians by one or more conditions: location (current or address), specialization, ranking, opening hours, etc.
- Requires Internet connection to function and utilizes a backend database that has a web-based management interface. Each update to the backend database should be reflected on the mobile end within 5 minutes.
- The application is free and serves ads that are renewed every set interval of time.
- FindDoc can be used in the US, Canada, Germany, and Japan.



Compatibility Matrix

Platform:	BlackBerry		iPad Air most common		iPad Mini		iPhone 6		Galaxy		
Browser:	BlackBerry		Safari		Safari		Safari		Safari		Chrome
Connection:	Net	WiFi	Net	WiFi	Net	WiFi	Net	WiFi	Net	WiFi	Net
Search by address	1	1	All	All	1	1	1	1	1	1	1
Search by current location	1	1	All	All	1	1	1	1	1	1	1
Ads Display	All	All	All	All	1	1	1	1	All	All	All
Country Config	All			All						All	All

+ Test for unsupported platforms

Questions



Mobile Testing class

- State of the Mobile
 - Stats
 - Technology
- Mobile testing challenges
- Testing approach (+ *exercises*)
 - Functionality
 - Performance
 - Compatibility
 - Usability
 - Security
 - Interoperability
 - Survivability and recovery
 - User acceptance
 - Production monitoring
- Mobile Test Lab
- Automating mobile tests

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Thank you!