

Becoming a Pro (II)

IN Mobile Applications Testing



Overview: Mobile APPS

➤ Categories

➤ Types

➤ Distribution/Installation/Logs

➤ Mobile Test Industry Standards

➤ Remote Device Access (RDA)

➤ Emulators

➤ Simulators

➤ Troubleshooting Guide

➤ App Risk Analysis

APP RISK ANALYSIS

Setting Up a Mobile Test Lab

What mobile devices will you use to test?

What devices are officially supported?

Make a decision based on user statistics

How will you source the devices?

When will you use an emulator or a real device?

What software will be maintained on the mobile devices?

How will the devices be managed and stored?

How can you be effective with the device power consumption? Do the devices really need to be charging all the time?

How will you load apps onto multiple devices?

Is there a need for a booking system for test devices?

How will you label devices with useful information? (OS, screen resolution, pixel density)

Can you use a background image to communicate information to the user of the device? For example, device information or a reminder of guidelines.

APP RISK ANALYSIS

What Makes a Mobile App or Website...ACCESSABLE?

Does audio and voiceover function and make sense?

Can you zoom in and out effectively?

Does the app accommodate all sizes of text?

Does the full list of touch device options work?

How large can on-screen buttons and navigation be?

Is there voice activation or control?

Is color contrast at a sufficient accessible level?

Is it worth considering audible, visible and vibrating alerts?

How does the app look inverted in colors? For example, white on black.

Have you explored the accessibility features of the app and mobile device you are using?

What types of gesture controls are available

APP RISK ANALYSYS

What Makes a Mobile App or Website...Social?

Can you register as a user via the app?

Can you login via the app?

Do you remain logged in when the app is not in use? If not, how does that affect the user experience?

Does the app or website support social authentication methods?

How easy is it to share media content, links, or files as well as comments and notes?

How easy is it to disconnect updates and communications via the app?

Can notifications be switched off or changed?

APP RISK ANALYSIS

What Makes a Mobile App or Website...Secure?

Can the app be decompiled?

How secure is the connection to the cloud server, if used?

Can the data in transit be intercepted and decoded?

Is any data or temporary data that the app uses stored securely on the device?

Is all app data removed when the app is uninstalled?

Is the app obfuscated using ProGuard/Dex Guard (Android only)

Does the app authenticate? How?

After an update, is my data still safe?

Should the user automatically log out after a period of time?

Can security be changed from other devices or websites?

What happens if the user gets locked out?

APP RISK ANALYSIS

What about ... – The Product – What Are The Basics?

Can I download the app?

Can I download an update?

Can I update the app when there are multiple updates available?
What happens if I don't update?

What happens when the OS is updated?

With what systems should it be compatible? For example, OS, platforms and browsers.

Can I uninstall the app?

Can I re-install the app?

Can I downgrade?
Should I be able to downgrade?

APP RISK ANALYSIS

What about ... – Functional Testing – What Does it do?

Does the app perform the designed tasks?

Does the app perform non-designed tasks?

Is prevention of actions adequate?

Does the app ask me to turn on services? For example, location specific, Wi-Fi, and social media.

Is the user redirected?
If so, where? From app to Web or visa versa? What do errors look like?

Does the user interface (UI) and design work as intended? Is there room for misunderstanding or error?

Is the UI appropriate for the form factor? For example, phone versus tablet, screen size, resolution, and existence of hardware buttons or keyboard.

Does it comply with any standards, good practice and guidelines?

Is the mobile app consistent with the desktop version, if it exists?

APP RISK ANALYSIS

What about ... – Data – Testing What It Processes?

How time applied to the app? For example phone time and server time? What about time zones?

What does it track and update? For example, reward points, friends, purchases, check-ins, social updates and user activity.

Does it sync and update?

What happens when it can't sync or update because the

Connecting through a paywall and haven't yet authenticated (Wi-Fi in Starbucks, an airport, or a local pub)

Disconnected because Web filtering rejected the request

Is there consistency between Web and mobile?

What clues can analytics provide?

How are things like user details and data saved?

What about data input and output? What type of data is accepted? For example, locations, preferences, friends, contacts, languages, files, size, media and audio

APP RISK ANALYSIS

What about : Platform – What Does it depend on?

Change the device settings around.
What do you notice?

What permissions does the app need?

What tablet device is being used?
What version of hardware or software?

Review app store submission requirements

Test content.
For example, text size, content adjustment and responsive design.

Test the UI and touchscreen gestures.
For example, swipe, zoom, pinch, multi-touch, shake and orientation.

Test peripherals. For example, keyboards, Mi-fi devices, BT peripherals, iBeacon, and syncing peripherals.

Test Camera, if applicable.
For example, taking photos, using stored photos and photo data.

How does the app run when the device is locked?

APP RISK ANALYSIS

Operations – How Is It Used?

Wi-Fi

3G

4G

Intermittent

Airplane mode

NFC

Through a proxy

Testing under no,
low and partial
connectivity

APP RISK ANALYSIS

How Is Data Saved?

Does the app write to the SD card?

What happens if the SD card is full? What happens if it is removed?

Is data saved online (in the cloud)?

If the data is saved online, can it be retrieved after reinstalling the app, or will it be available on the app on a different device with the same user account?

If the cloud is used, how does lack of connectivity affect the user experience?

Is the data saved securely? (See “Security” section)

What if data is lost? Are there backups?

APP RISK ANALYSIS

Interruptions?

Phone calls

Text messages

App notifications

Battery Warning

Forced updates

Voicemail

Switching
between apps

Locking and
unlocking the
screen

Music playing
while using the
app

MAM/MDM
solution running
on the device

Out of memory
(general
performance
interruptions)

Data app
interruptions
(WhatsApp, Viber,
Tango)

Audio interrupts from multiple sources
(iPod, Media player, Other audio apps)

APP RISK ANALYSIS

Customer Feedback

What are customers saying about app?

App reviews

App ratings / comments

Comments, forum posts and articles on the (social) web

Complaints and support request

GOOD LUCK!!!

