Mobile Threat Landscape and Device Biometrics

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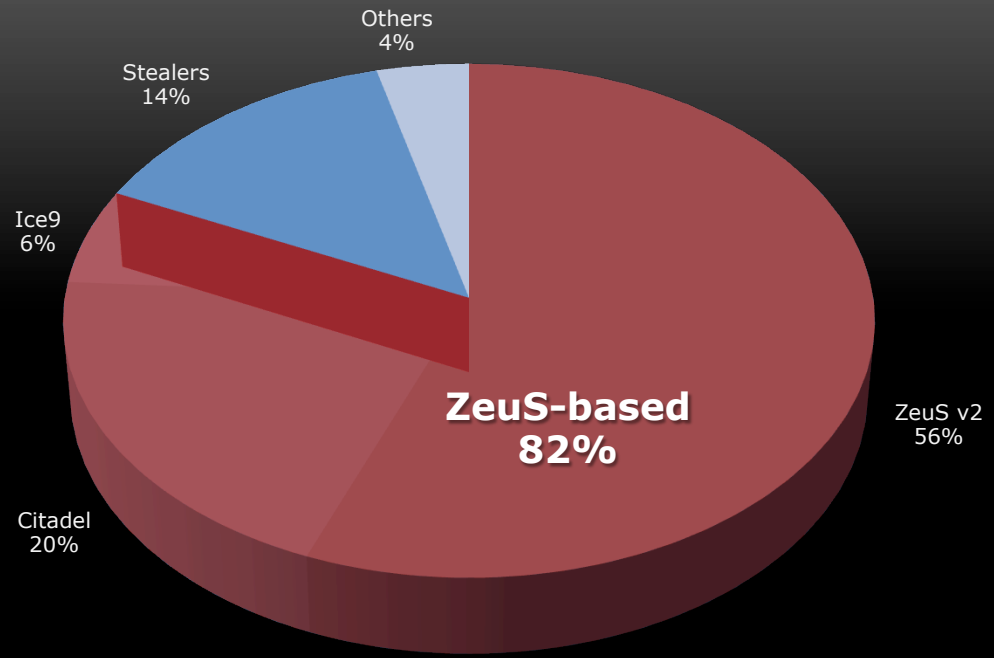
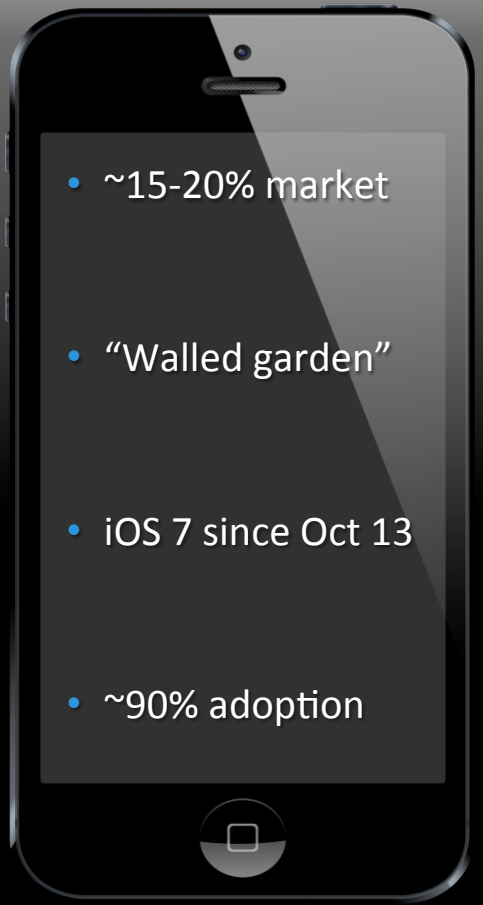
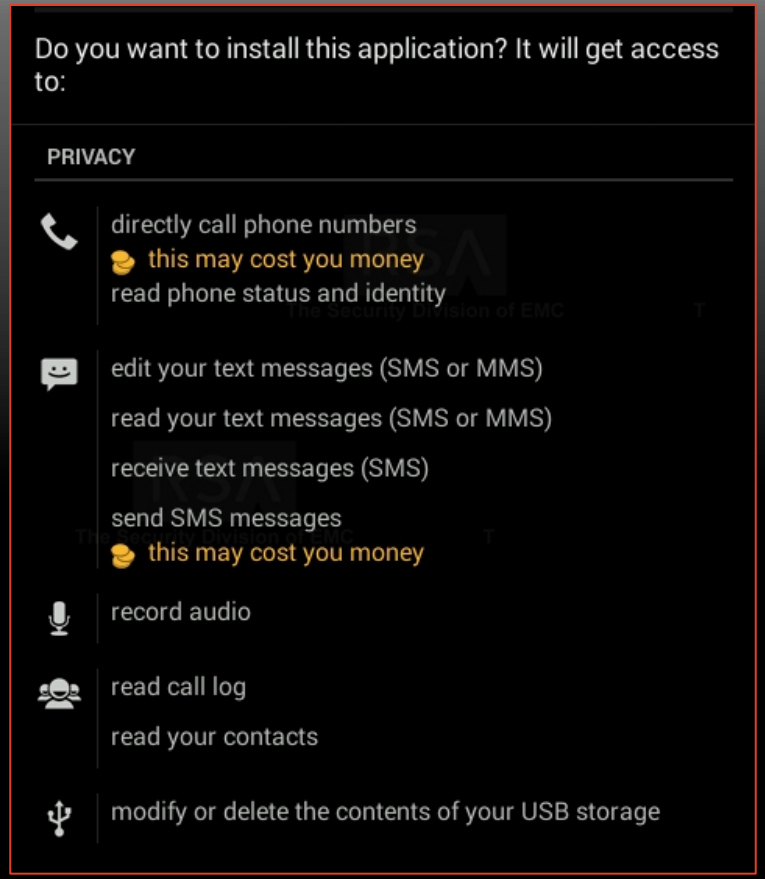
Malware Landscape (RSA AFCC, 2014 H1)



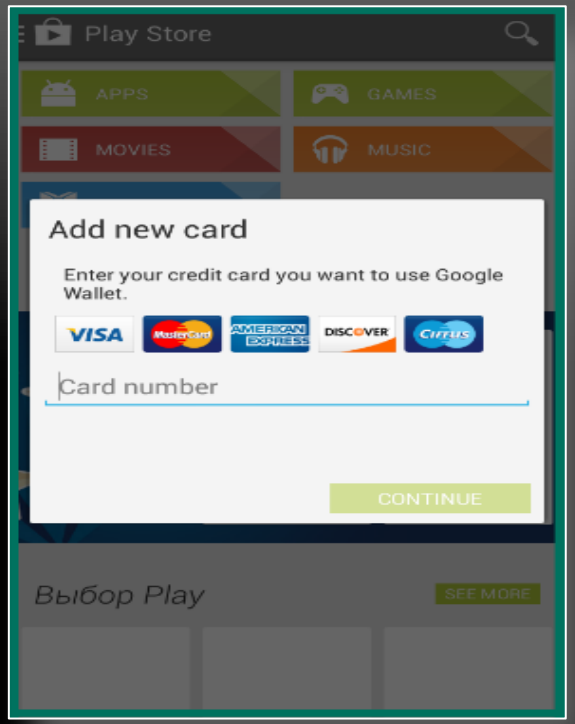


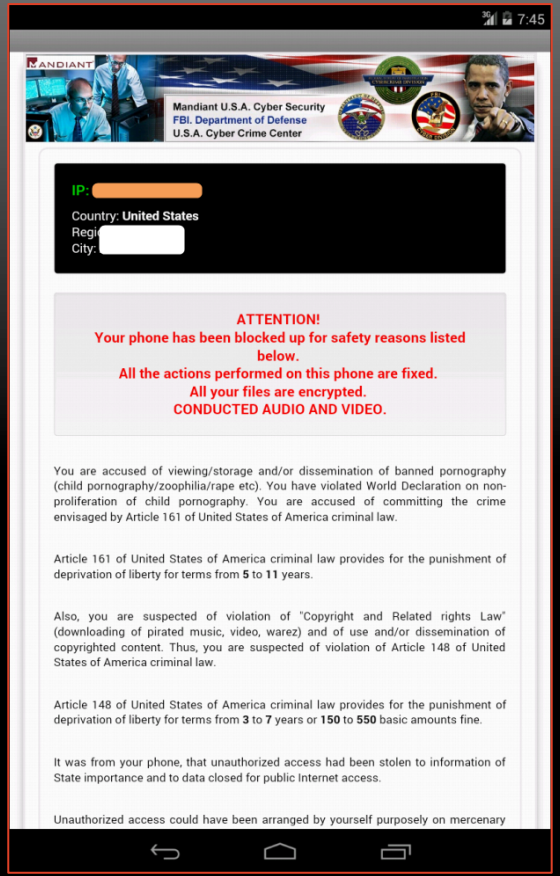
- ~15-20% market
- “Walled garden”
- iOS 7 since Oct 13
- ~90% adoption

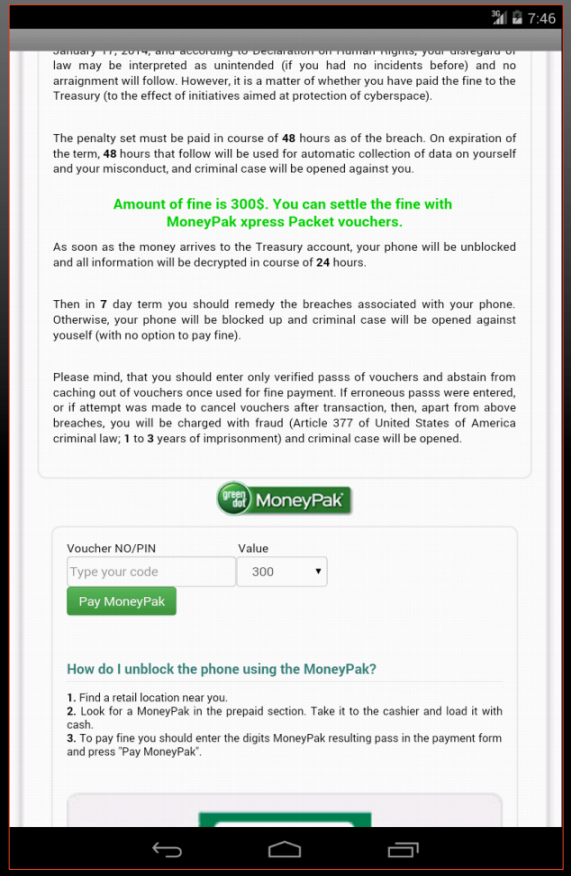
- ~65-70% market
- Open source
- Kit Kat (4.4) since Oct 13
- ~20% adoption



SVPENG: Mobile Phishing







Source: http://malware.dontneedcoffee.com/2014/05/police-locker-available-for-your.html

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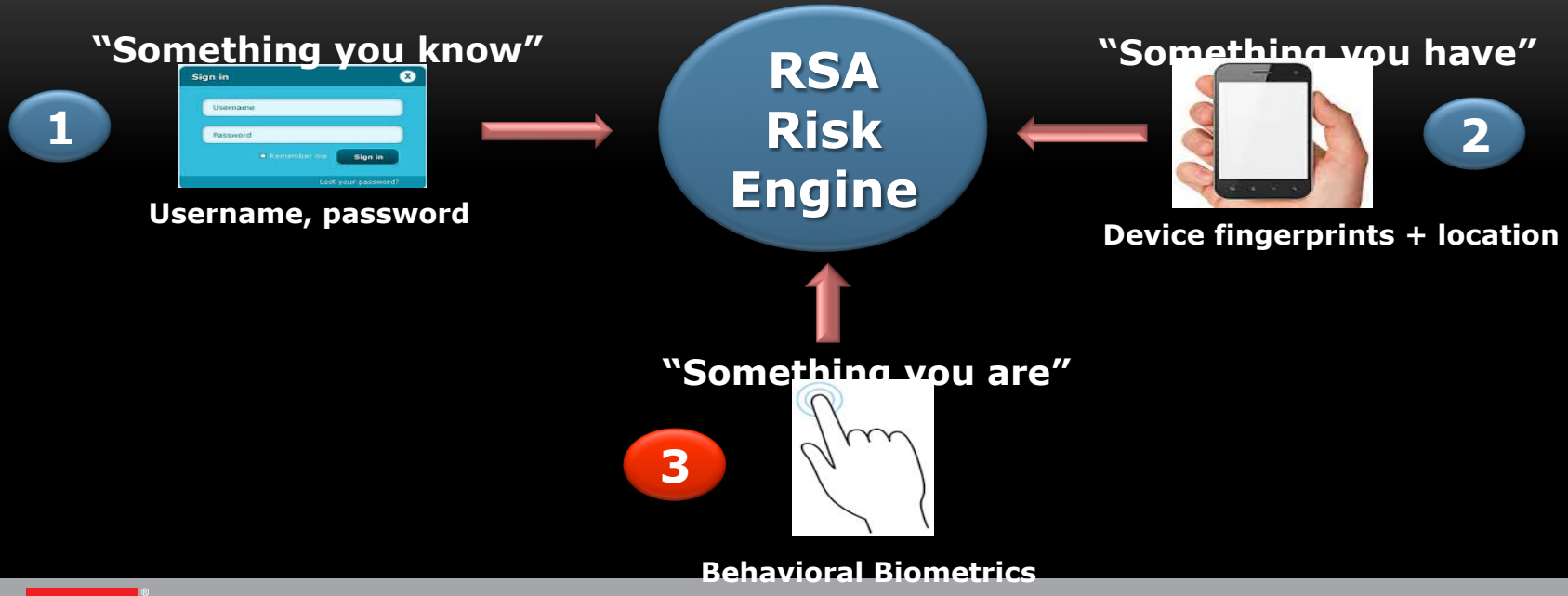
Primary Use Cases

- Step up authentication in online application
- Step up authentication for mobile application
  - Enhanced Biometric Authentication
  - Behaviometrics
- 3DS/Securecode
  - Joining MasterCard effort to redefine 3DS protocol for mobile
  - Support RSA 3DS platform
  - Allow mobile app transaction to go through 3DS protocol
  - Sell through development platforms: Shopify and more mobile app builders

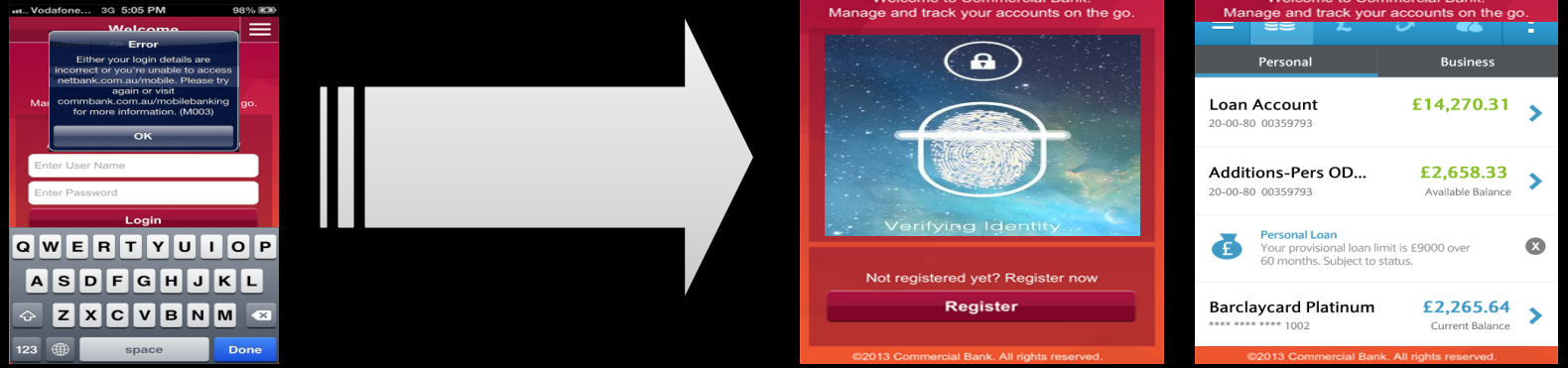
Behaviometrics

- Enhance mobile security by adding a third factor
  - "Something you are"



Consumer Mobile Primary Authentication

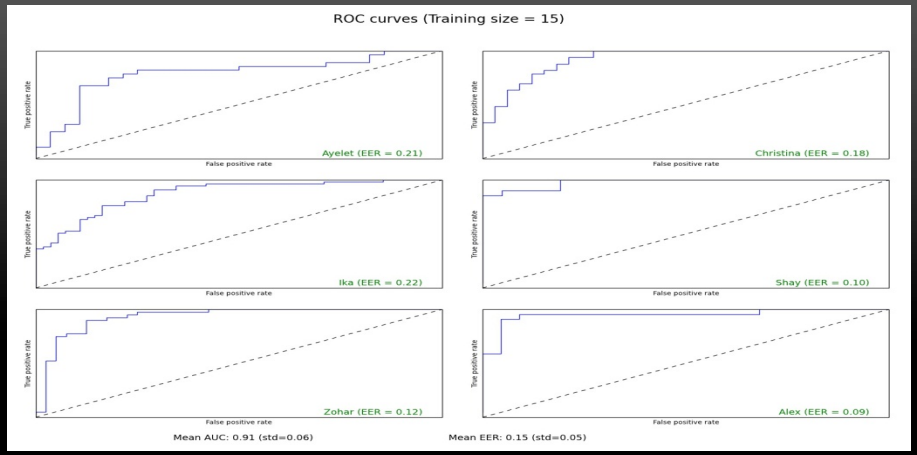
- Biometric and Behaviometric knowledge to authenticate a user to a mobile app without needing a username and password.
  - Improving usability
  - Increasing security



PoC Description

- MIT demo app for Android was configured to collect typing time latencies during login
  - Digraphs: time between each letter
  - Trigraphs: time between every other letter
- Data collection
  - Employees were selected to type a random generated credentials
    - Username: 34cJ817X; PW: x5651DA9
  - ~50 times each over a day or two

Results Analysis



- Genuine users can be distinguished from impostors
  - Average equal error rate: ~20%

THANK YOU

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