Safely Using Mobile Network Services

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Professional Information Security Association

Who is PISA?

- Professional Information Security Association is a not-for-profit organization for local information security professionals. We focus on developing the local information security market with a global presence in the industry.
- Our website http://www.pisa.org.hk

Introduction

- Mobile Network Services is an expanding area of networking

- We will study what is the key issues on mobile network device and user habit

- Case Study

- Security Tips

How powerful is your mobile phone?

- Address Book
- Calendar
- Camera
- GPS
- Internet browsing
- Email
- Social networking (Facebook)
- Voice Memo
- Ebook
- File Transfer
- Bluetooth
- SMS, MMS and Instant Messaging
- Gaming
- TV / Radio
- Apps

- **And most important feature is Phone Calls**

Powerful Device

- Our mobile device is like a mini computer
- Storage.
  - My first mobile phone was able to store 100 phonebook records. My current mobile phone can store movies, books, music upto 16GB

Powerful Device

- Processing Power
  - The processing power of mobile device is enhanced that the user will not aware of background process is running (e.g. malicious code and virus)

Powerful Device

- **Multi-Channel**
  - Mobile device is able to access mobile phone, GPRS, 3G, GPS, SMS, MMS, Wifi, Bluetooth, flash memory, etc channels. It's challenging to ensure all channels are secure.

Your Attention is Important

- Mobile device is small and expensive. They are targets for thief.

- Mobile device stored not only your information as well as your friends & relatives information

- Caller ID & SMS messages maybe used for authentication purpose. It opens a door for spoofer.

Your Attention is Important

- If you leave your phone unattended,.....
- Fraudsters may use Call and SMS forwarding to collect your information

Open Network

- Your mobile device may be used to identify your location
- With GPRS it can be used to pinpoint your exact location
- Unencrypted Wi-Fi network
- Bluetooth device hacking

Mobile Apps

- There are more than 1 million apps for one particular smart phone.

- How many of them are intrusive?

- Do you really understand how the app works?

- iPhone VS Android. Which is safe?
  - Application screening before publish
  - Authenticate the publisher

Mobile Apps

- Some App may access your address book

- Some App may store your password on the mobile device

This application has access to the following:

⚠ **Your location**
coarse (network-based) location, fine (GPS) location

⚠ **Network communication**
full Internet access

⚠ **Phone calls**
read phone state and identity

⌄ Hide

○ **Network communication**
view network state, view Wi-Fi state

OK   Cancel

Android app steals bank login details

An application available via Google's Android Market was infected with a trojan designed to steal users' bank login details. The application reportedly pretended to simplify the customer's mobile access to accounts at various different banks. The incident is only be

News

▬▬confirms critical bug

banking app

Saved access codes, other info to hidden file on smartphone and synced computers

By Gregg Keizer
July 26, 2010 02:38 PM ET

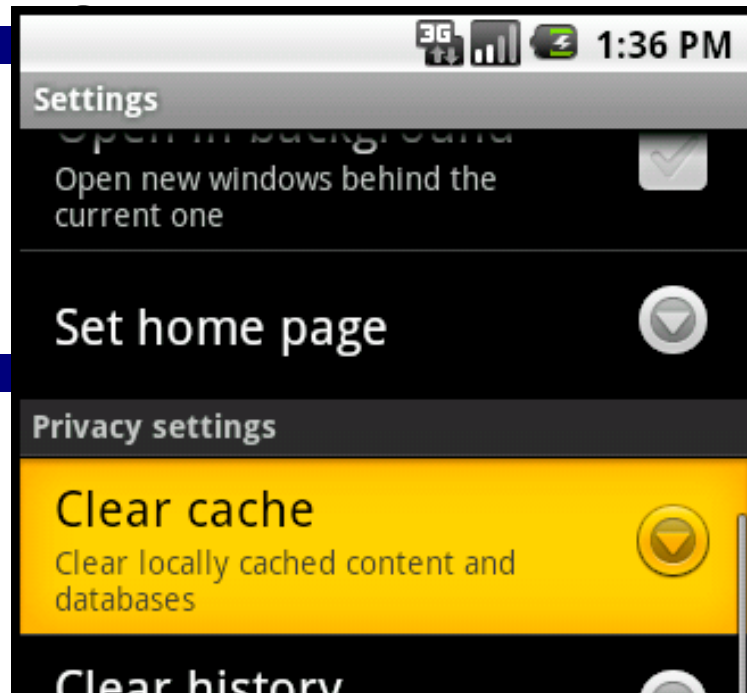💬 Comments (3)   ✓ Recommended (27)

Size does matter

(a) Real Chrome

(b) Fake Chrome

- Mobile devices' screen are generally smaller
- What is the difference?

iPhish: Phishing Vulnerabilities on Consumer Electronics

Yuan Niu, Francis Hsu, and Hao Chen

Caches

- Unlike other computer, use able to delete caches on m emember to comple g. Instant

Jailbreak

- Jailbroken / Rooting phone opens a door for intruder
- It's able to install non-approved apps
- Expose to Trojans, malware, etc

Data synchronization

- Data Sync with PC
- Calendar Sync with google / yahoo / etc calendar
- Address book
- Virus & Malicious code may be transferred

Corporate Usage

- It's more than a personal device. More and more companies allow staff to receive corporate emails.
- Un-provisioned device violate corporate security policy

BofA and Citigroup testing iPhone for corporate email: report

Fri Nov 5, 2010 9:55am EDT

(Reuters) - Bank of America and Citigroup are

Corporate Usage

- What can we do to enhance security level?
    - ☐ Remote wipe out when it's lost
    - ☐ Password protection
    - ☐ VPN on network level

Q & A

Thank You!