



Stay Safe Online

Information no one else tells you

Sponsored by: BinaryBackyard.com

Giving kids a safe place to play online



Outline

Part 1 : Information one tells you about staying safe and secure online

Part 2 : Technical loopholes to bypass security

Safety and Security



Security: We must secure our computers with technology in the same way that we secure the doors to our homes.

(i.e. Technological Solution)

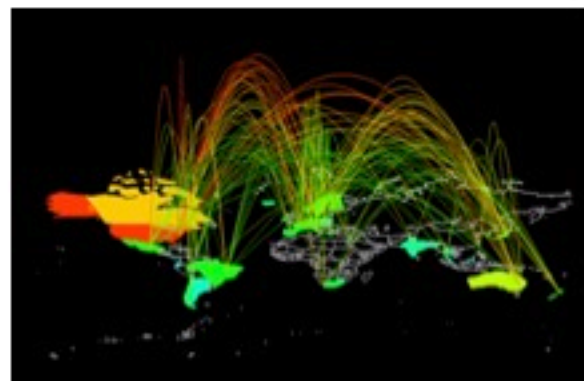


Safety: We must act in smart ways that help protect us against the risks that come with Internet use.

(i.e. Behavioral Solution)



Problem



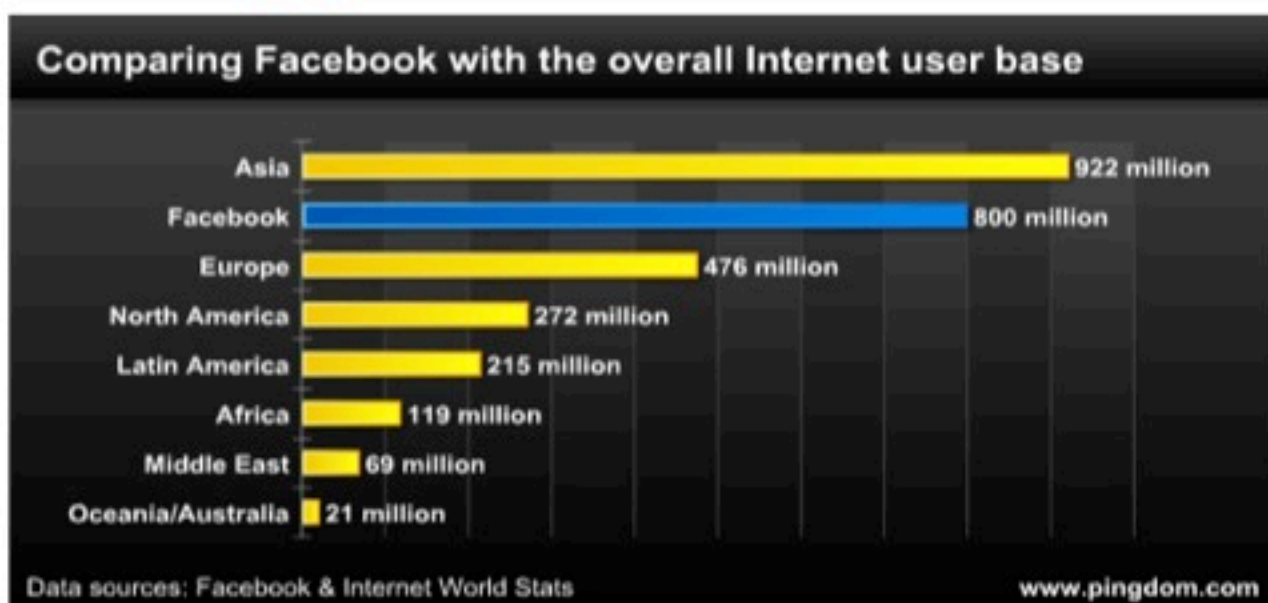
The Internet is bigger than any one country

- *Translated* : You are only required to follow the laws of the country where you are presently located
- *People only follow the laws that are enforced*
- *Some people will risk prosecution for monetary gain*

Understanding the Scale of the Internet

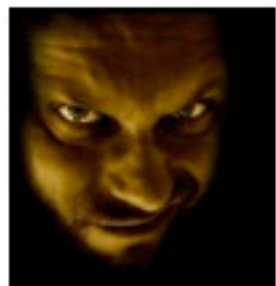
Date	Total Users of the Internet	% World Population
May, 2004	757 millions	11.7 %
Sept, 2011	2,180 millions	31.5 %

Facebook is bigger than the entire Internet was 2004

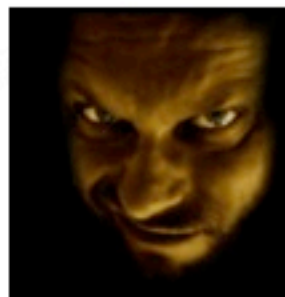


Source: <http://www.pingdom.com/2011/10/05/facebook-now-as-big-as-the-entire-internet-was-in-2004/>

Understanding the Scale of the Internet



2,180,000,000 Internet Users
0.001% are bad guys
 2,180,000 bad guys



Risks of being Online



To Computers

- Viruses
- Worms
- Trojans
- Spyware

Who are they?

Graffiti Artist
 Organized Criminals
 Governments



To Families

- Cyber bullies
- Piracy
- Invasion of privacy
- Over-sharing
- Stalkers

Who are they?

Friends/Neighbors
 Predators
 Family Members



To Personal Information

- Online fraud and phishing
- Hoaxes /Spam
- Identity theft
- Service Exchange

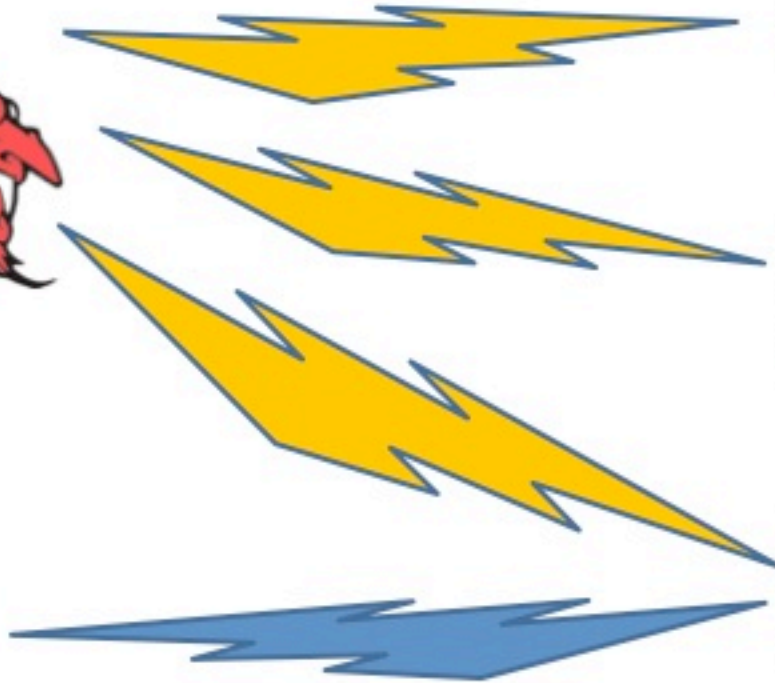
(sell your information)

Who are they?

Thieves
 Corporations

You can only defend !

Bad Guys Attack



You Defend



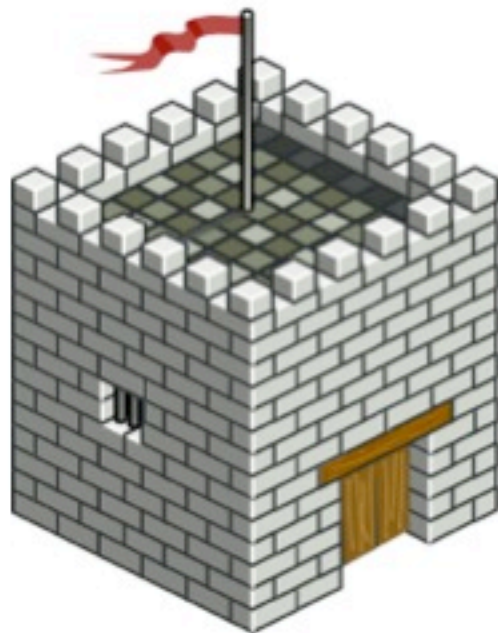
Activate your Defenses!



Your Defenses



Behavior
(Safety)



Fortification
(Security)

Your Safety Defenses



- Avoid the “online equivalent of bad neighborhoods”
 - P2P programs and file sharing sites
 - Adult sites
- Minimize what information is available to steal
 - Share as little information as you can
 - Minimize using sites that “must have” personal information
 - Use a nickname/pseudonym whenever possible
 - Be smart: If something does not look right choose not to disclose.
 - Emails / Fake websites





If you have kids ...



- Talk with your kids about what is considered private information
- Setup Internet usage rules for the family
 - *- does not have to be the same for everyone*
- Keep Internet devices in public areas
- Use a nickname for your online persona
- Use a timer to limit Internet

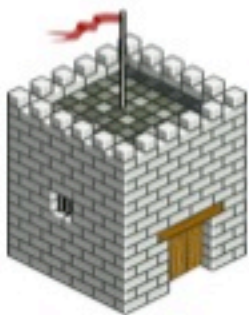


Extra Steps to Stay Safe

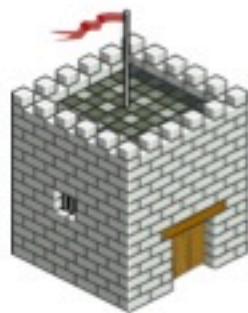


- Use parenting controls on the device
- Set the privacy controls on social sites (like Facebook, Google+)
- Don't store your passwords/credit card information on websites or browsers
- Using only trusted computers for financial transactions (don't use cybercafés, work computers..etc)





General Security Tips



- Keep your system up to date with the latest patches and versions
- Look for the **https://** or the padlock
- Pay attention to the pop-up warnings
- Install a Anti-Virus program
- Backup your data regularly
- Encrypt your valuable data

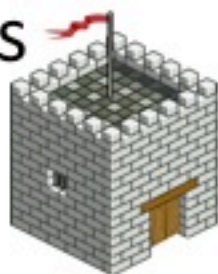


Extra Steps to help Protect



- Longer Passwords are better
- Do not open email attachments from strangers
- Setup Google/Bing filters to prevent accidental wandering into a bad site
- Subscribe to a DNS security service

Use Ghostery/No Script to prevent cross site scripting attacks.





OSX built-in Defenses



- Access Warning System
- Automatic Updates
- Sandboxing
- Password Restrictions
- Parenting Controls
- Firewall
- File Encryption (FileVault)
- Memory Execute Disable
- Library Randomization



OSX Missing Defenses

- Antivirus protection
 - ESET Cybersecurity for Mac (\$40)
 - ClamXav(\$free)
- Socket-filter firewall (pre-Lion)
 - Little Snitch (\$25)
 - NoobProof (\$free)
- Digital signatures
 - Require before allowing a program to be installed
 - Make it like iOS





Legal Attacks



*You agree to give your personal information
for using their services*



Apple is spying on us!



+

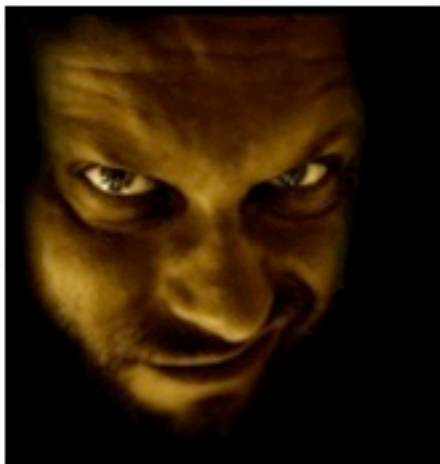


Built in to Apple Apps
requires to Opt-Out



Apple and our partners and licensees may collect, use, and share precise location data, including the real-time geographic location of your Apple computer or device.

iTunes License agreement



Illegal Attacks



- Distributed Denial-of-Service Attacks (DDoS)
- Spamming
- Sniffing Traffic & Keylogging
- Infecting New Hosts
- Identity Theft
- Attacking IRC Chat Networks
- Hosting of Illegal Software
- Google AdSense Abuse & Advertisement Addons
- Manipulating online polls



Spear Fishing for Apples

Is a Mac safe from PC viruses?

Yes. The OS X operating system isn't susceptible to the thousands of viruses plaguing Windows-based computers. And although no computer connected to the Internet is completely immune to all viruses and spyware, OS X has built-in defenses designed with your safety in mind. The Mac web browser, Safari, alerts you whenever you're downloading an application — even if it's disguised as a picture or movie file. And Apple continually makes free security updates available for Mac owners. You can even have them download automatically.

<http://www.apple.com/why-mac/faq/>



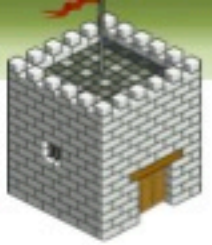
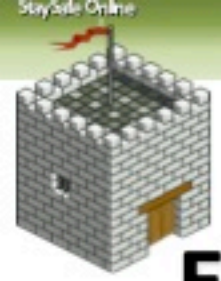
More than Apple on Mac



UPDATES : Your best defense

- There are over 4000 websites dedicated to teaching “hacking”, including tools to make it easy.
- Almost all of the techniques taught take advantage of “known vulnerabilities”.





ENCRYPTION : Safe Storage and Passage



News from Hackathon-Asia

8 Feb 2012 – Singapore

Arun Thampi : *“Upon inspecting closer, I noticed that my entire address book (including full names, emails and phone numbers) was being sent as a plist to Path.*

Now I don't remember having given permission to Path to access my address book and send its contents to its servers, so I created a completely new “Path” and repeated the experiment and I got the same result – my address book was in Path's hands.”

<http://mclov.in/2012/02/08/path-uploads-your-entire-address-book-to-their-servers.html>



Path.inc Response to being Caught

Dave Morin - Co-Founder and CEO of Path

*“This is currently the industry best practice and **the App Store guidelines do not specifically discuss contact information.**”*

<http://mclov.in/2012/02/08/path-uploads-your-entire-address-book-to-their-servers.html>



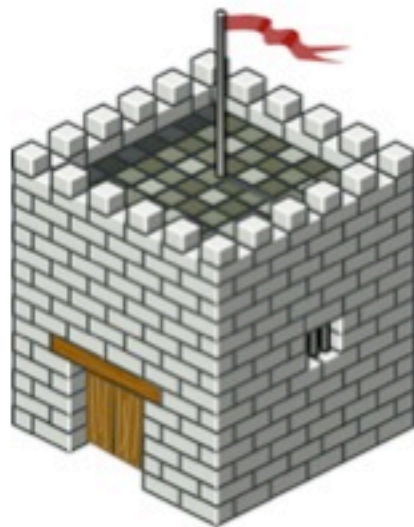
“...so we proactively rolled out an opt-in for this on our Android client a few weeks ago and are rolling out the opt-in for this in 2.0.6 of our iOS Client, pending App Store approval.”

<http://techcrunch.com/2012/02/07/path-uploads-your-iphones-address-book-to-their-servers-without-a-peep/>

Summary



+



You need both Safety and Security

Defenses depend on Device

- Every device that connects to the Internet needs its own security.



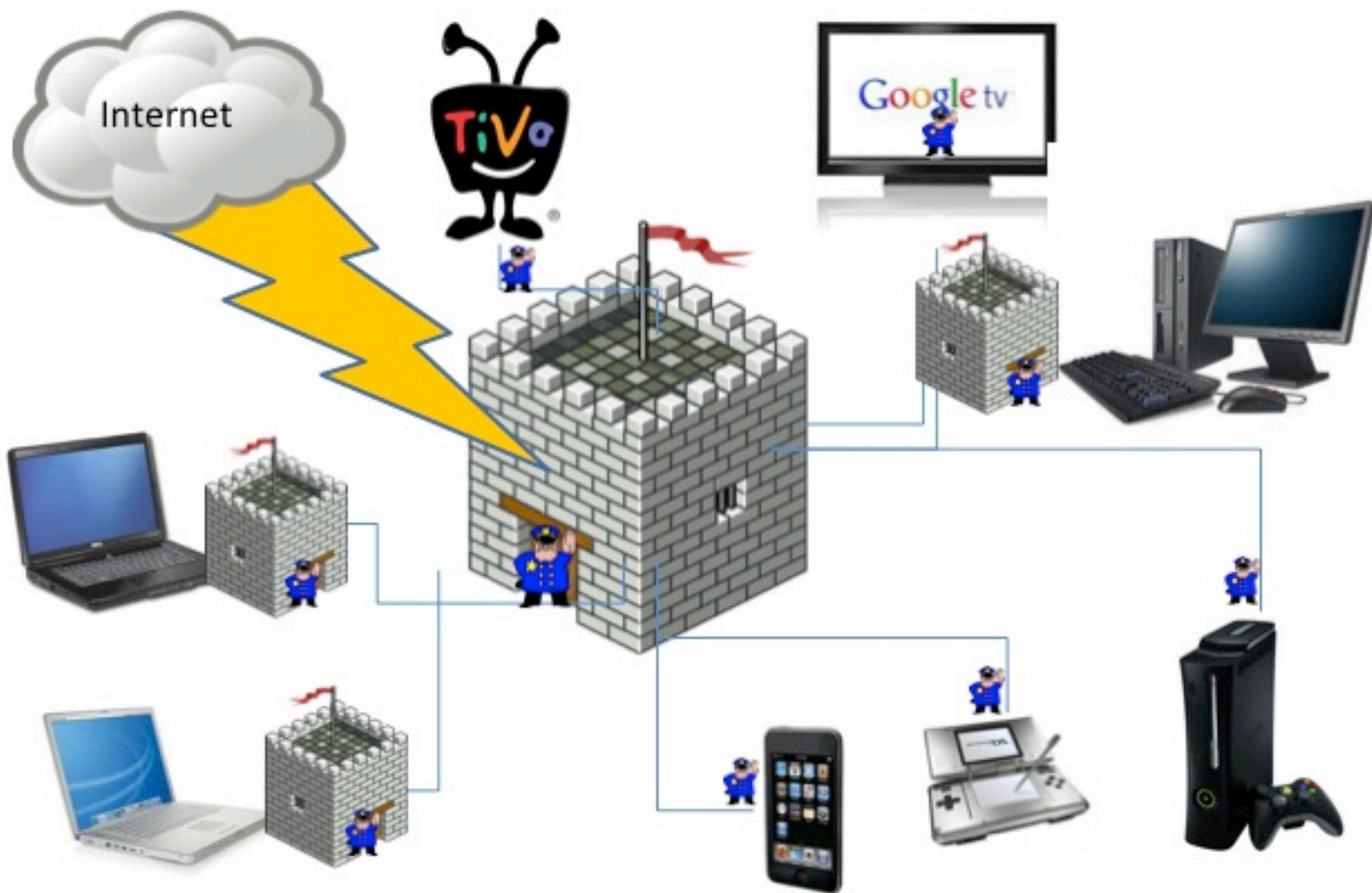
BlackBerry



Wii



Defend Every Device



Lets take a break



Part 2

Technical loopholes to bypass security



Lets Hack !

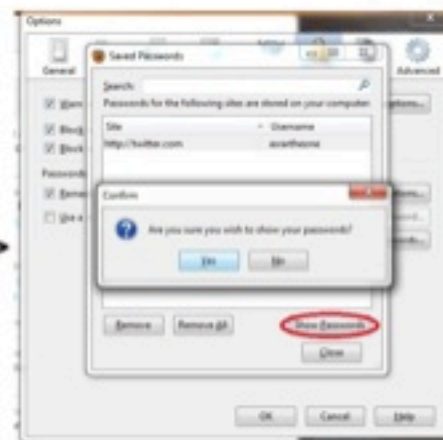
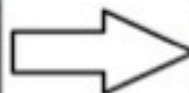
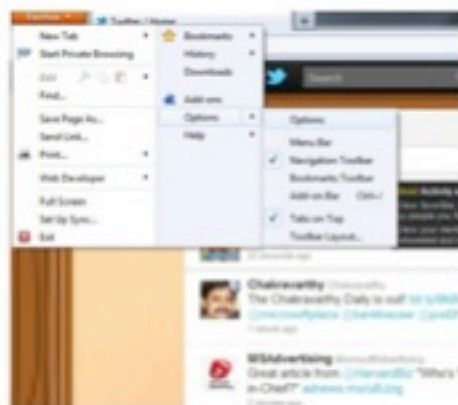


Jailbreaking

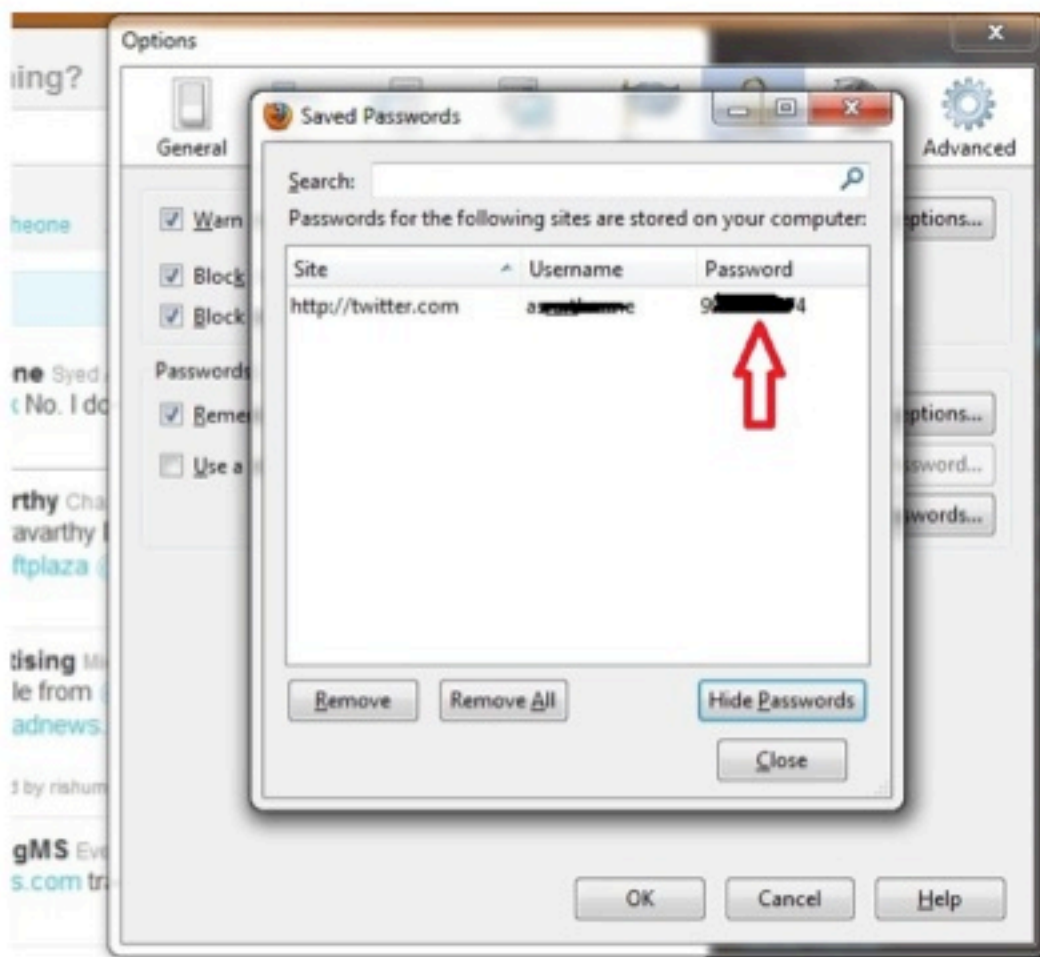


Jailbreak your iPhone,
iPod, or iPad

Gather the Stored Passwords

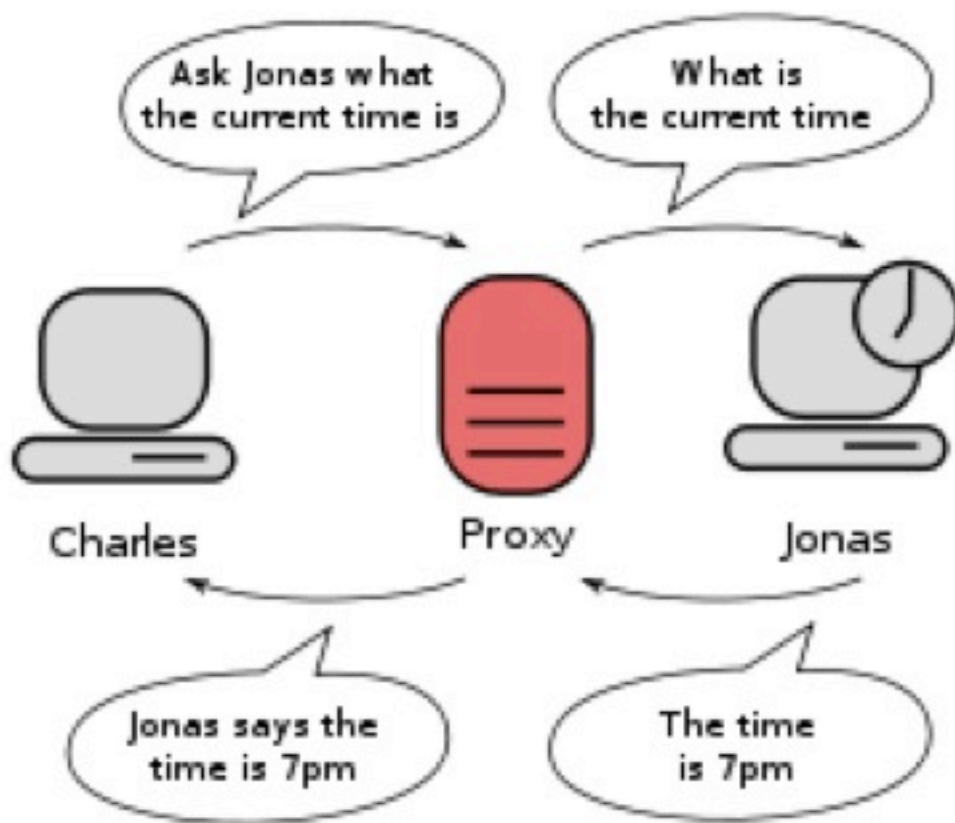


Gather the Stored Passwords

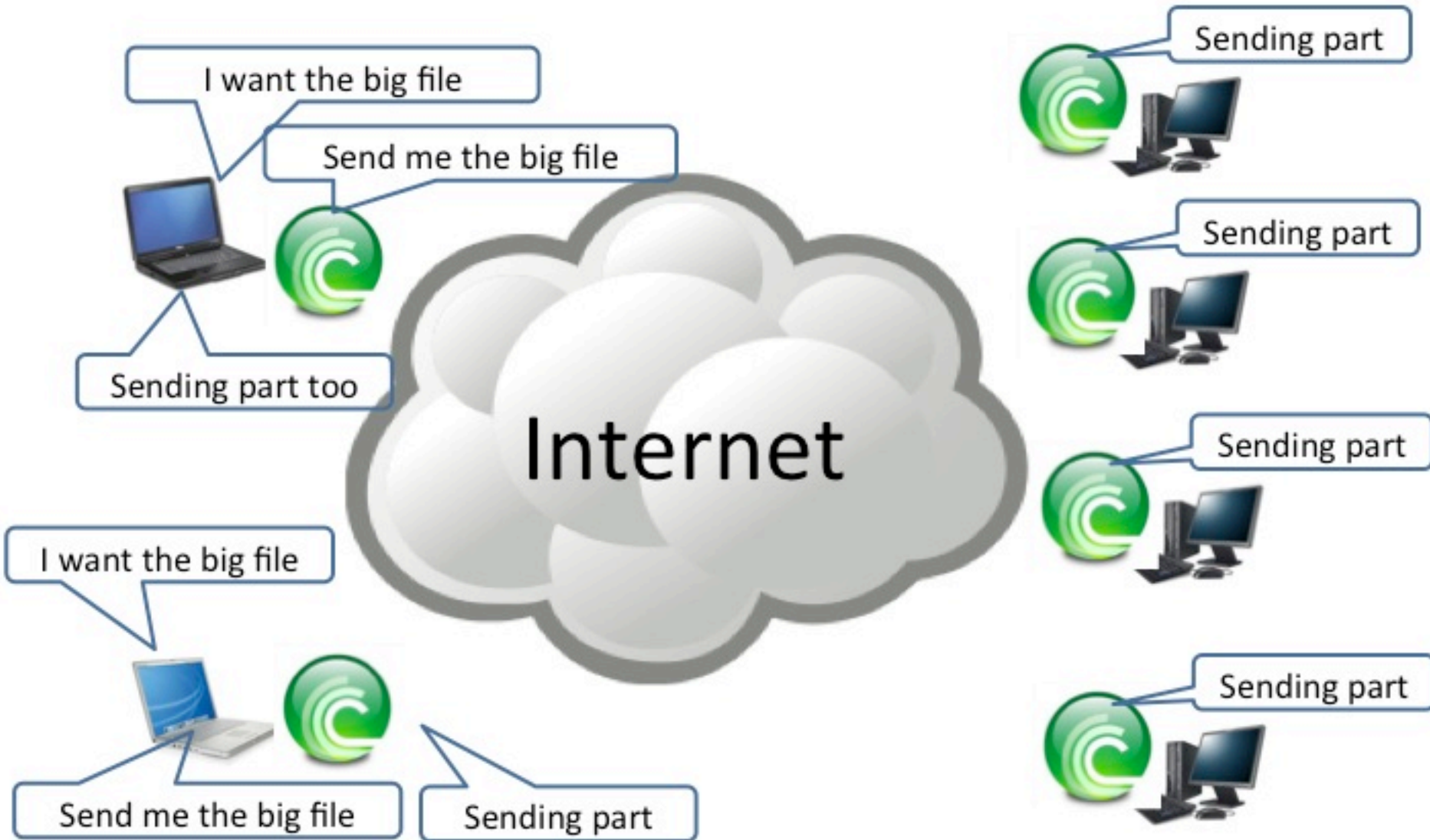


Bypass Filters and Firewall Restrictions

Many use a proxy website, which is essentially a web page within a web page, to circumvent web filters and to surf the web anonymously.



Use Peer-2-Peer to avoid Prosecution



Hiding your tracks

It is trivial to delete computer browsing history by flushing your cookies



Download Content for FREE

There are online storage sites that host content



Dropbox



Create another persona

A survey conducted by Consumer Reports revealed that in the past year 7.5 million active Facebook users were under the age of 13.



Set up a HoneyPot



Sign Up

It's free and anyone can join

Security Check

Enter **both words** below, **separated by a space**.

Can't read the words below? [Try different words](#) or [an audio captcha](#).

Diving

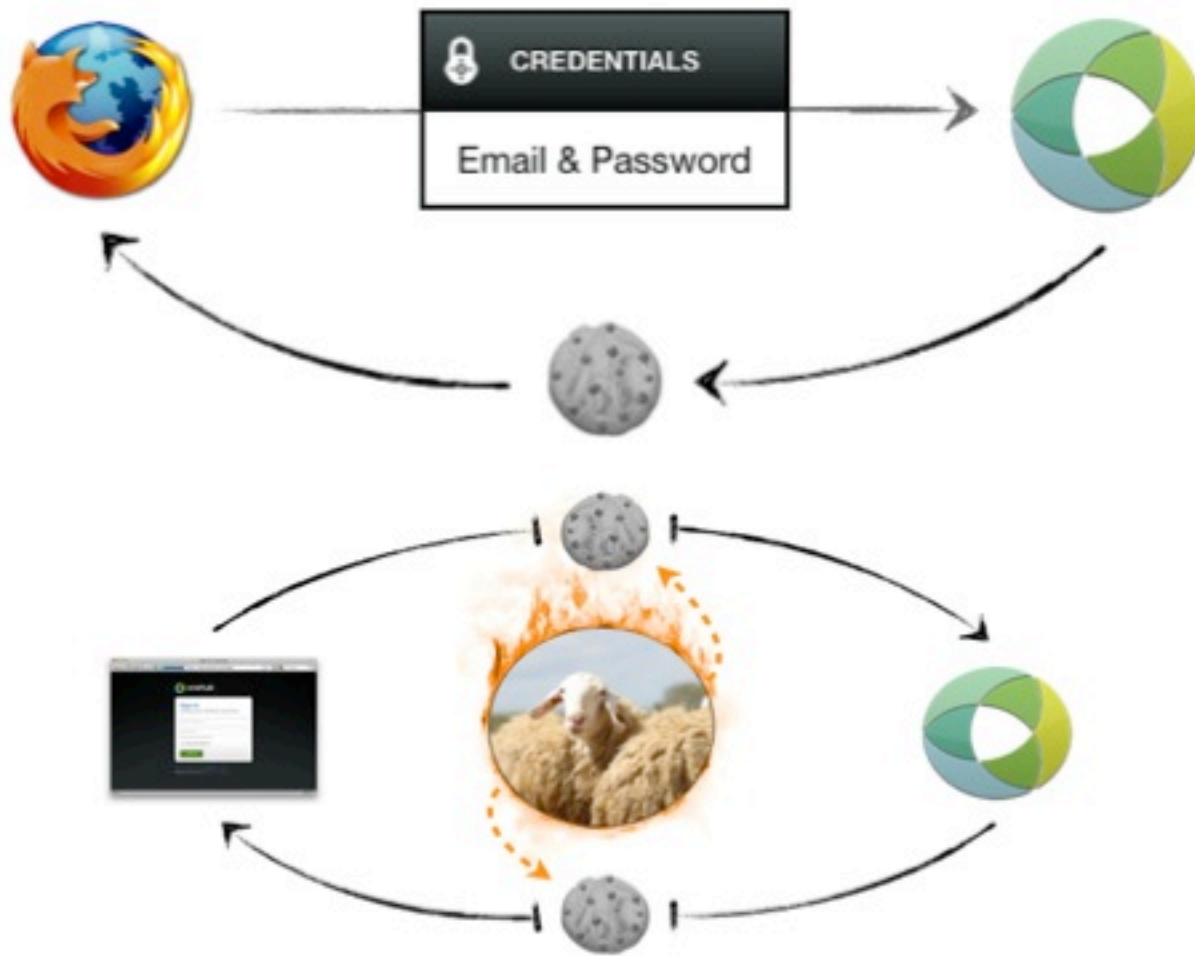
Sweet

Text in the box:

[← Back](#)

[Sign Up](#)

FireSheep



Questions and Answers

