



Staying safe online

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Parents Association AGM - October 12th 2015

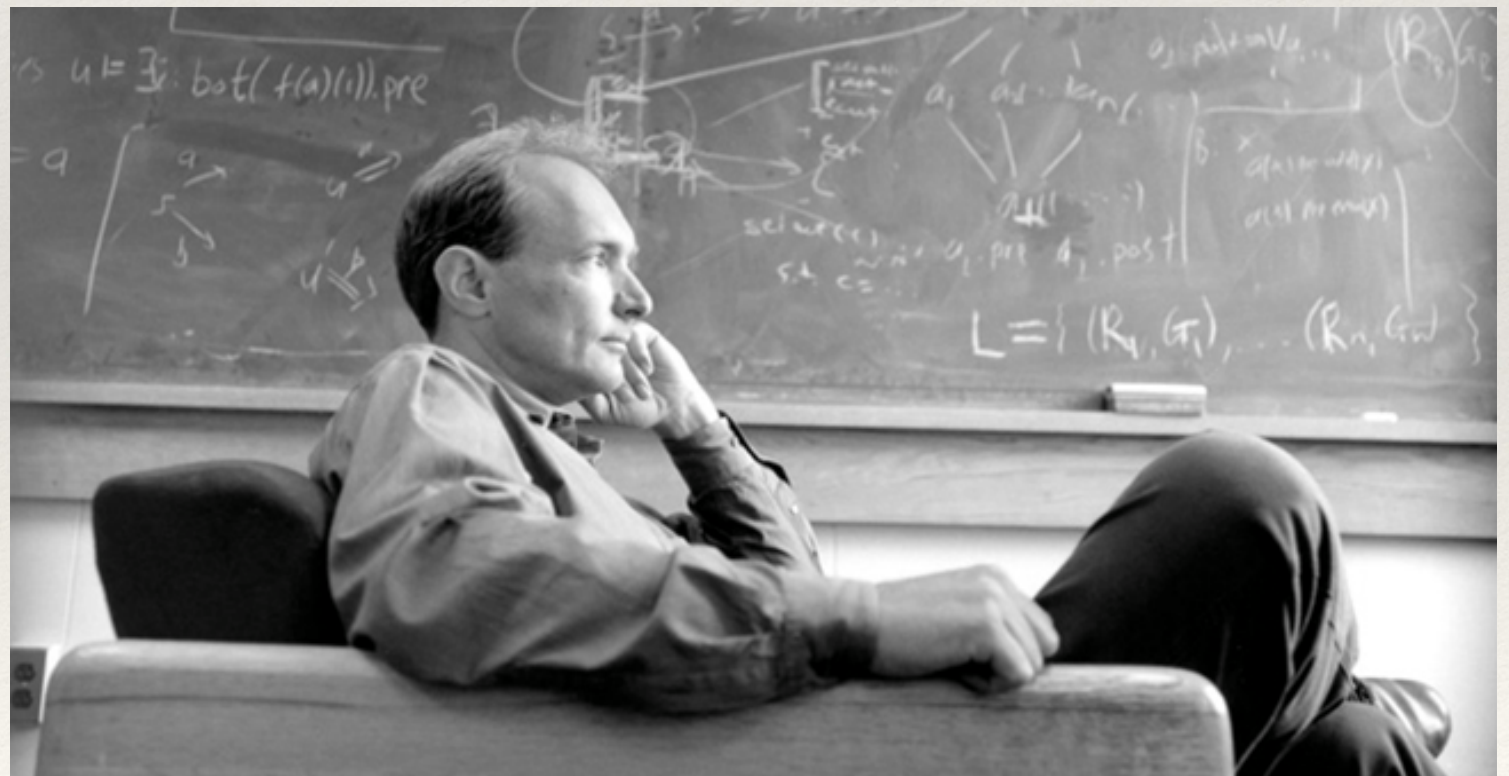
www.holmpatrickns.ie

What will we cover today

The Internet is wonderful and dreadful.

How to sail safely in choppy waters.

- ▶ Identity
- ▶ Payments
- ▶ Viruses / Malware
- ▶ Social Media
- ▶ Child Safety
- ▶ Paul's Top Tips
- ▶ Useful links.



Sir Tim Berners-Lee - Inventor of the World Wide Web

Who am I ?

- ❖ Paul McCarthy-Brain
- ❖ Background in online gambling systems development, high frequency trading, Director of a CIA / NSA staffed cyber security systems company in the USA and now founder of an online payments and digital identity startup in the IFSC.
- ❖ Built first computer in 1982 have worked in electronics and computing since 1995.
- ❖ Restorer of 1970's based computing hardware.
- ❖ Nerd.
- ❖ I also manage Holmpatrick's IT systems and provide support.

Why should you care about

Your Identity

It is your mobile phone.

Your phone knows your exact location

Who you speak and message to

Who your friends & family are

What things you like and dislike

Where and when you take your holidays

Who your children are and what they look like.

Your deviant side.

Banking and a whole host of passwords.



Passwords

- ❖ Statistically your passwords are worthless
 - ❖ Using probability and information gathering we can usually calculate your password within minutes.
 - ❖ Nationality, information from social media. Pets / Kids / sports teams / wife / husband / hobbies - people are predictable.
 - ❖ You and others leak a frightening amount of information about you even if you think you're being careful.
 - ❖ Brute force attacks using passwords lists
- ❖ You will re-use the same passwords all over the place.

Passwords - Protect yourself

- ❖ Don't use a dictionary word
- ❖ Don't add numbers to a dictionary word before or after
- ❖ Adding uppercase letters to dictionary words does little to protect you.
- ❖ Make them long
- ❖ It's a chore but consider the consequences.



Password cracking algorithms don't look at words like you or I.
Trying to trick them with substitute characters and numbers is pointless.

Password

Password22

P@\$\$\$w0rd01

99p@s\$W0rd!99

ALL AS USELESS AS
password

Longer Passwords
better

Random letters and
numbers

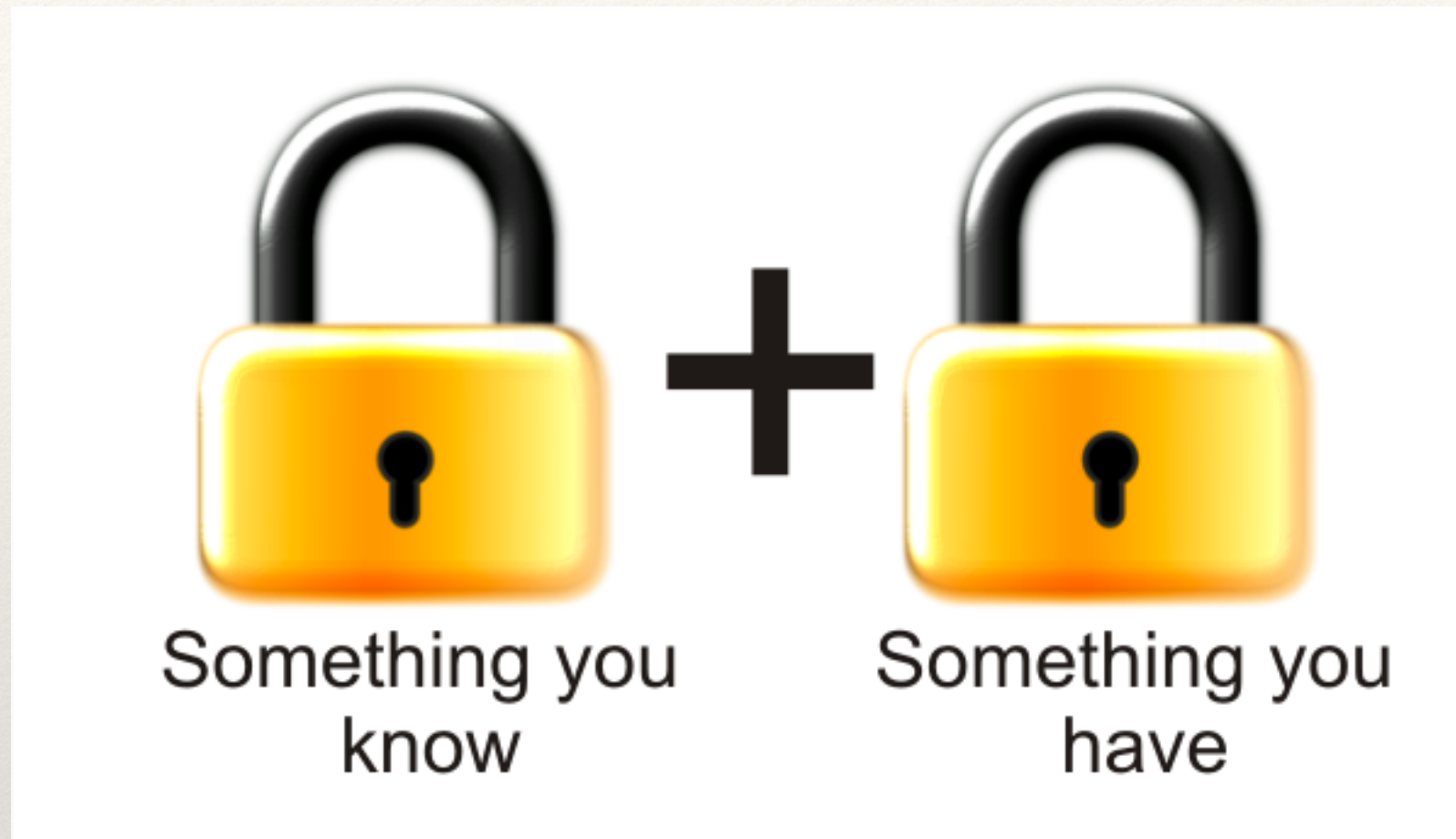
How do you remember this meaningless string ?

1. Parents Phone Number
2. Company you worked for in the past
3. Favourite holiday destination
4. Significant dates
5. Pop a character on the end or start

!860SciBar0901BadosTex365!
!860Sc1Bar0901Bad0sTex365!

Doesn't have to be
<— this long

Solution : Two factor authentication



A good password is no longer enough

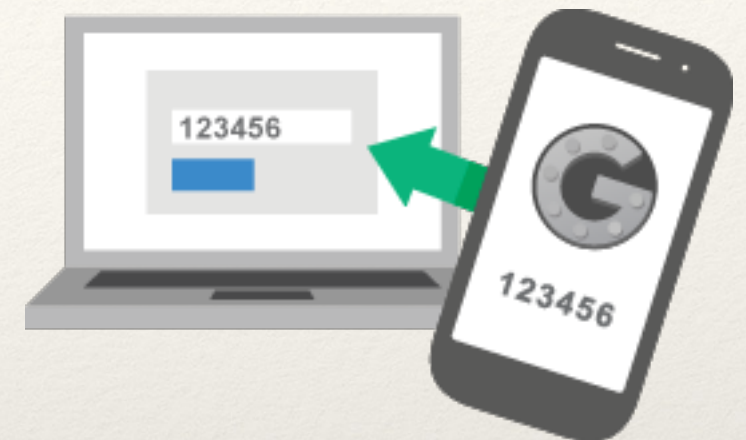
You will still use it in lots of places

You need a temporary password password



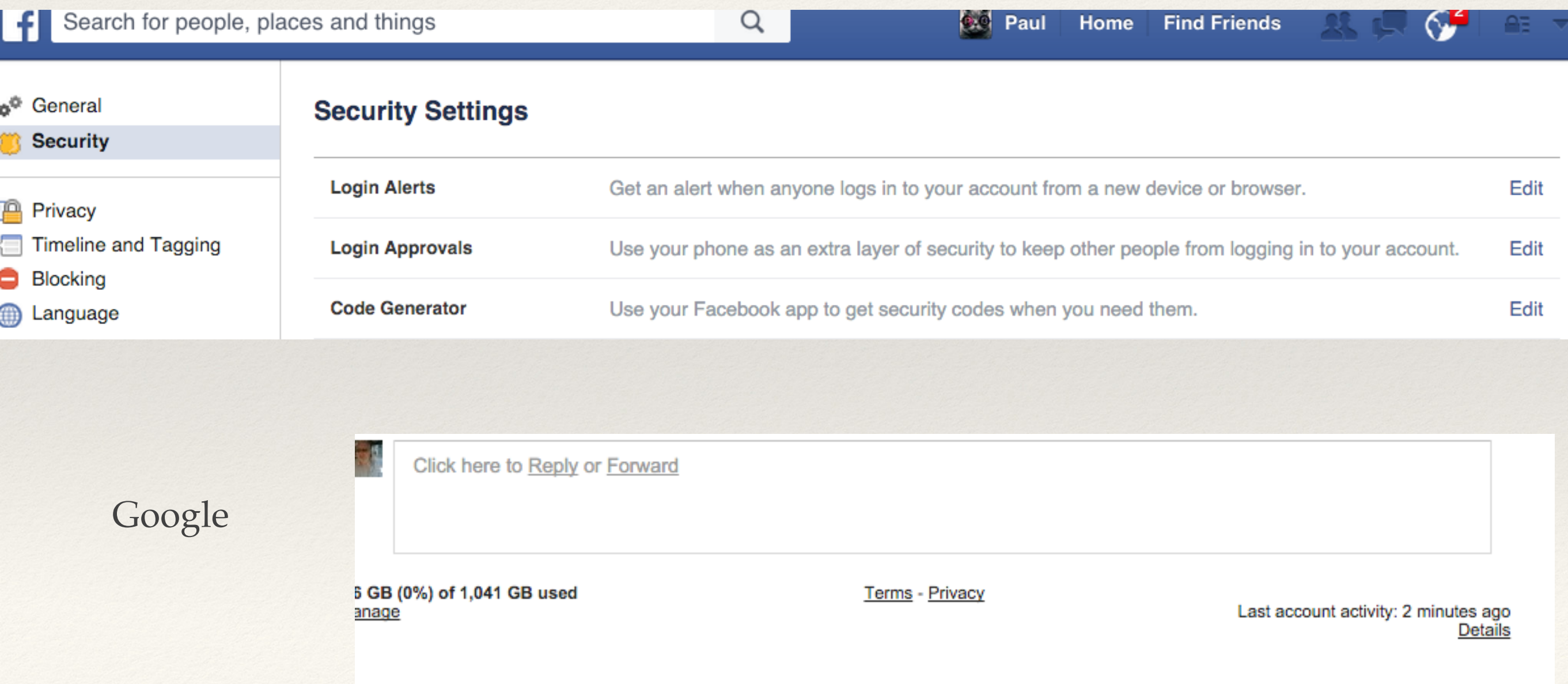
Two Factor Authentication

- ❖ Very simple to implement
- ❖ Start using it on Google / Facebook tomorrow
- ❖ If someone gets your password, they still aren't getting into your private stuff
- ❖ Code changes every sixty seconds and lives on your mobile.



Know when someone tries to access your private info.

- ❖ Get notification when someone tries to log in from an unknown computer or location..



The image is a screenshot of a Facebook profile's 'Security Settings' page. At the top, there's a navigation bar with the Facebook logo, a search bar, and user navigation links like 'Paul', 'Home', and 'Find Friends'. On the left, a sidebar lists settings categories: General, Security (highlighted), Privacy, Timeline and Tagging, Blocking, and Language. The main content area is titled 'Security Settings' and contains three rows of settings:

| Setting | Description | Action |
|-----------------|--|----------------------|
| Login Alerts | Get an alert when anyone logs in to your account from a new device or browser. | Edit |
| Login Approvals | Use your phone as an extra layer of security to keep other people from logging in to your account. | Edit |
| Code Generator | Use your Facebook app to get security codes when you need them. | Edit |

Below the settings table, there's a section for a post or comment with a profile picture, a text input area containing the text 'Click here to [Reply](#) or [Forward](#)', and a 'Like' button. At the bottom of the page, there's a status bar showing storage usage ('5 GB (0%) of 1,041 GB used'), links for 'Terms' and 'Privacy', and account activity information ('Last account activity: 2 minutes ago' with a 'Details' link).

Google

Authentication rules

- ❖ Long complex passwords
- ❖ Two factor authentication - use your mobile as a key
- ❖ Get notified when someone accesses your account
- ❖ Have two sets of passwords
 - ❖ Registration for nothing important
 - ❖ Important passwords
- ❖ Change every 3 months
- ❖ Have an email account just for registering with sites.

Online Payments

- ❖ You are a target
- ❖ Fraudsters everywhere
- ❖ Credit card info is bought and sold by bad people.
- ❖ You can limit your exposure.



The bad people

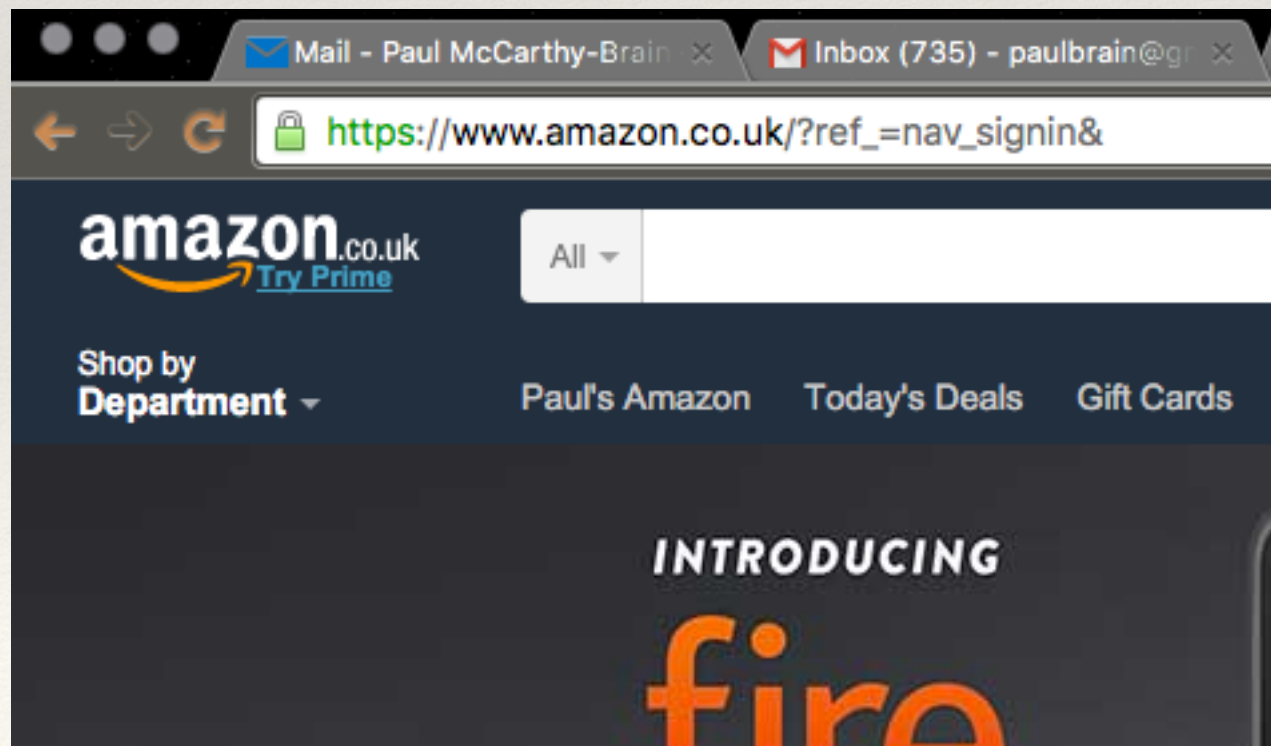


The bad people are actually computers. Theft doesn't require much skill or knowledge.

- ❖ Viruses & Malware on your computer
- ❖ Log key strokes and look for numerical patterns (Credit card digits)
- ❖ Usernames and Passwords
 - ❖ You don't need credit card details to go shopping on your Amazon account !

Where are you at risk ?

- ❖ Only supply credit card details and personal information to reputable web sites.
- ❖ Look for spelling mistakes
- ❖ Ensure the SSL Certificate is valid



SSL Certificates should always
be green.

If not , then leave.

If it's red then leave

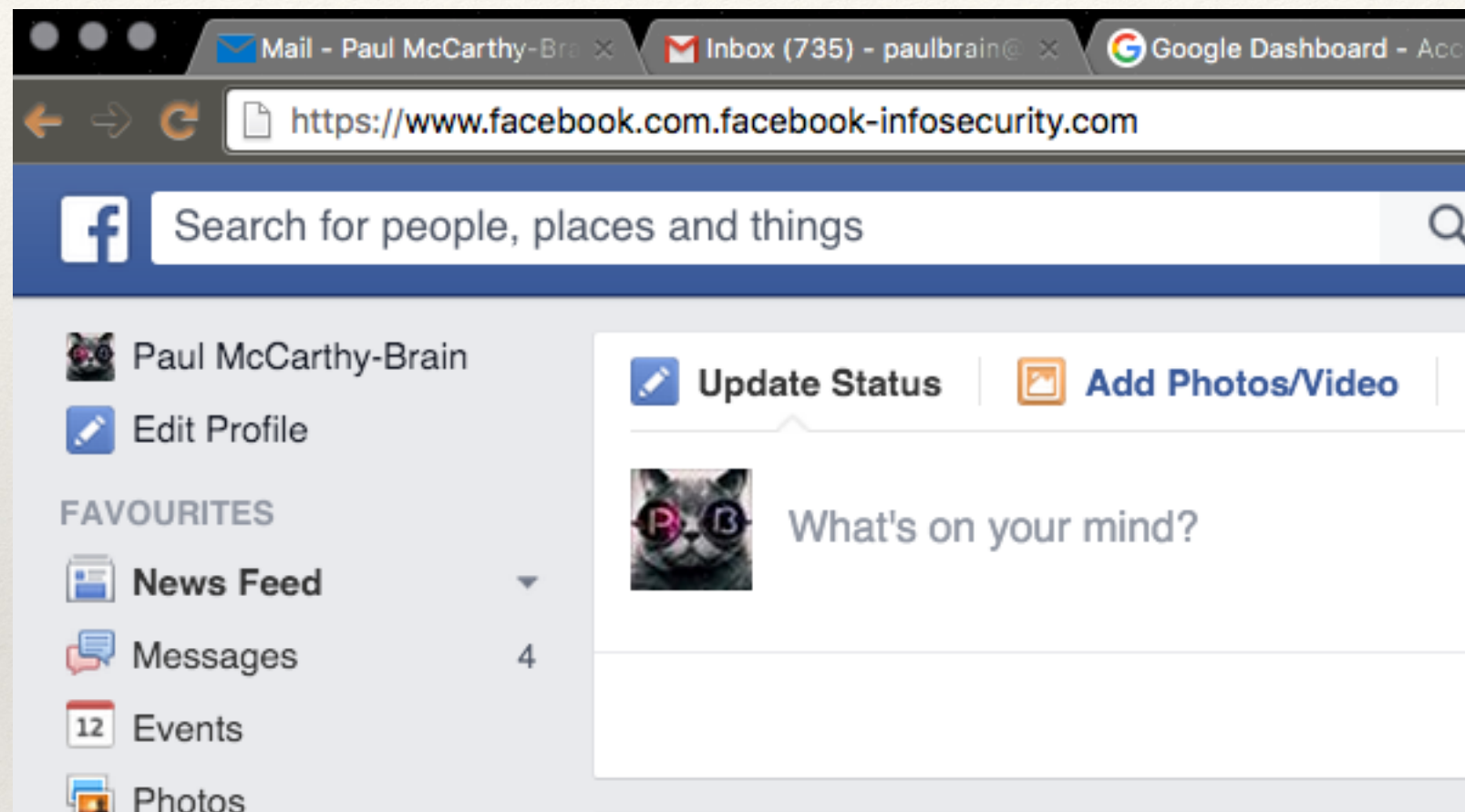
If you're not 100% sure , leave.

Man in the Middle Attacks - The address is OK, I should hit proceed anyway ??



Google Chrome and Firefox are seldom wrong. Listen to it and leave.

It might look like a popular web site , it may let you log into your account - but this is actually a copy.



Watch out for web addresses which are similar at a glance to the original

If you're in doubt. Close the browser and type the address in yourself.

Limit Exposure

- ❖ **Companies love this data**

- ❖ Credit card information
- ❖ Name
- ❖ Address
- ❖ Telephone / Mobile number
- ❖ Date of birth
- ❖ Mothers maiden name / pets
- ❖ Email
- ❖ Gender
- ❖ Nationality
- ❖ Agreement to sell your personal info to other vendors
- ❖ Your IP address, what other sites you like, your geo location
- ❖ Your social media credentials

You shouldn't trust
people with your
data.

People like me
make mistakes.

Leaves your
identity and
financial
information
exposed.

PayPal is a zero knowledge transaction

Vendor gets paid by PayPal not you

Vendor does not receive anything other than shipping details



If vendor is compromised your financial details are safe.

Unless it's PayPal that gets hacked !

Payment top tips

- ❖ Only use long standing reputable vendors
- ❖ If you've never heard of them - walk away.
- ❖ If the web address looks wrong. Google the address and get a verified link.
- ❖ Watch out for SSL certificates - if it's not green - walk away
- ❖ Spelling mistakes and language defects are a constant give away.
- ❖ Limit the amount of companies you give your credit card details to.
- ❖ Use services like PayPal / Stripe where possible.
- ❖ Create a Google Search notification for the last 12 digits of your credit card. If it pops up online, Google will send you an email.

Virus / Malware / Hijacking

- ❖ All too easy to get infected.
- ❖ Your machine can get compromised just by viewing a website.
- ❖ Bad guys play on your fear.
- ❖ Good tricks and tools to stay safe.



We Will Remove All Your
Viruses or Malware.
Guaranteed.

Is Your PC Infected With Viruses?

Microsoft XP, 2000, Vista, 7, & Server

We can remove all viruses, spyware,
and malware Online while you watch!

We provide the following
tools for Free with this
service, these tools will
help you maintain your PC

- Virus scanner installed
- Malware scanner installed
- Spyware scanner installed

With the viruses gone and
tools to protect, your PC
will feel fast again!



As a Bonus we install
all the tools you need to keep your
PC Safe!

Tetabyte Systems

Virus / Malware / Hijacking

- ❖ Minefield of mis-information , deception, fraud and really bad software.
- ❖ Everyone has an opinion - most of it is wrong.
- ❖ Some really talentless people exploiting consumers with scare stories and peddling snake oil based tat that's simply not needed.

Common Scams

- ❖ Calls at home direct from Microsoft - kindly informing you that your home computer has a virus.
- ❖ It is not Microsoft. They do not have your mobile number.

Best thing to do in this instance is to tell them to hang on whilst you go to your computer then go and make a cup of tea.

Have fun with them and waste their time.

Frequently the grasp of English is poor.

This is always a scam.



Common Scams

- ❖ Pop-up on the screen or within a browser session informing you of infection and an immediate call to action.
- ❖ This is always a scam. Do not call, do not supply credit card details.
- ❖ If it is a popup window power off and seek immediate help.

Best thing to do in this instance is to search out your nearest local tech person and get them to give your device a thorough cleaning.

This is always a scam.

No Antivirus company ever makes requests for users to call a number and pay for remote support.



Microsoft Windows

- ❖ If you're using Windows XP - stop using this machine immediately. If its not compromised already it will be.
 - ❖ Replace Windows with Linux Mint or upgrade to Windows 10
- ❖ Use Chrome or Firefox as default browser
- ❖ Install AVIRA <https://www.avira.com/en/avira-free-antivirus>
- ❖ If machine running incredibly slowly - install and run COMBOFIX
<http://www.bleepingcomputer.com/download/combfix/>
- ❖ Change DNS settings to OpenDNS Family Shield
 - ❖ 208.67.222.123 , 208.67.220.123
 - ❖ Prevents access to malware infected sites, blocks adult content / racial hatred / inappropriate sites etc

Apple Mac

- ❖ Wrong to think you cannot get a virus / malware on a Mac. It is much much less common though
- ❖ Install Avira / Avast / Sophos. These will block access to malicious site and scan downloaded files
- ❖ Use Open DNS family shield - prevent Adult content / malware / Racial hatred / Age inappropriate content
 - ❖ 208.67.222.123 , 208.67.220.123
- ❖ Use Chrome / Firefox as these will prevent access to malware sites also.

Linux

- ❖ Who uses Linux ?
 - ❖ Holmpatrick National School does.
 - ❖ Never slows down, free and vastly more secure than Windows and Mac
 - ❖ All applications are free and constantly updated.
- ❖ It's an ideal use for that 'old' PC. Great for secure web browsing and recycling perfectly good hardware.

iPad / iPhone

- ❖ Really secure operating system within reason
- ❖ Safe browsing still needs to apply
- ❖ If you 'root' the device, consider it vulnerable
- ❖ Protect by passcode or if using the newer iPads / iPhones setup the finger print scanner.
- ❖ Online banking is safest when using an iPad / iPhone over a PC
- ❖ No real need for Anti-virus - but do setup remote wipe and encryption if you lose it.

Android / Phone / Tablet

- ❖ If you download apps from only the Google Play store you're going to be OK
- ❖ Do not download from 3rd party sources
- ❖ Install Avast from the Play Store.
 - ❖ It will locate and wipe your phone if lost
 - ❖ Prevent you from downloading risky apps
 - ❖ Prevent you from visiting nasty web sites.

Social Media

- ❖ Great fun
- ❖ However, it leaks information that shouldn't be out there.
- ❖ Risk vectors all over the place.
- ❖ % of people are rubbish and are very very disappointed with their lives - like to vent online
- ❖ Bullying a serious problem.



Social Media - Risk Vectors

- ❖ The entire planet knows your whole family are 1000's of miles away from the house.
- ❖ Post holiday snaps upon your return. Your life doesn't need to be a 'live feed'.
- ❖ Bad people love real time data.
- ❖ You may trust your friends, but do you know all your friends friends ? Do you trust them too ?



Social Media - Risk Vectors

- ❖ If the service is free, then YOU are the product.
 - ❖ Everything you post, text, pictures, shopping habits, like / dislikes are the property of a corporation.
 - ❖ Don't assume that these companies will always have your best interest at heart in the future. These are publicly traded companies designed to make a profit.
 - ❖ Spend a moment to think what if Google sold your historical search data to an insurance company ?
 - ❖ What if Facebook makes your political views available to a tyrannical future extremist faith based government ?
 - ❖ We don't know what's next in our world and thats a problem.

Social Media - Risk Vectors

- ❖ Youtube, Pictures , Vines, Instagram etc are almost impossible to remove once uploaded.
- ❖ We need to educate our youth that future employers will search for them online and find pictures like this ..
- ❖ Social engagement needs to be managed effectively.
- ❖ The above picture is an actual person and now he's being used to demonstrate failure.. This could be you or someone you know.



Who gets the Job ?



Social Media - Bullying

- ❖ A keyboard and screen gives a bully a false sense of anonymity and freedom to say some pretty nasty things.
- ❖ There are some really dreadful people out there (Called Trolls) and because its the internet, you have access to the entire worlds repository of rubbish / mean people.
- ❖ Everyone has an opinion and it's a cultural norm these days to hate and ridicule. Twitter and blog comment sections are a great example of this.
- ❖ Positivity has all but vanished.
- ❖ The Internet is a harsh and lonely place
 - ❖ gives the illusion of community.



Social Media - Top Tips

- ❖ Remember - once uploaded you have little or no control
- ❖ Information posted, pictures, video, opinions may come back to haunt you. Think twice before posting.
- ❖ Delay posting holiday snaps until after you get back. Don't let bad people know your house is empty.
- ❖ Be aware of the information you provide online. Kids names / schools they attend / their likes / activities / frequency patterns.
- ❖ Manage social media output.
- ❖ Check privacy settings frequently. Don't post publicly.
- ❖ You have no privacy online. It is an illusion.

Child Safety

- ❖ It's easy to hand your children a tablet.
- ❖ You need to ensure that you protect them from naughty / hate / violent content.
- ❖ Ideally you should be sat with them at all times - but this is unrealistic.
- ❖ So what can you do to make it better ?



Protecting the Impressionable

- ❖ YouTube - In Settings select “Strict Filtering”
- ❖ Configure your home router with Family Shield DNS settings to automatically block Adult content / Hate / Violence etc from every device in the home.
- ❖ XBOX and Playstation , turn on parental controls to prevent access to violent games and video content.
- ❖ Set up Netflix profile just for the kids. Nothing but kids movies and cartoons / documentaries.
- ❖ Check Internet history regularly - if you see something that’s not on the approved list - talk to them about it.
- ❖ No computer devices in the bedroom. Web cams can be hacked.

Paul's Top Tips



- ❖ Don't keep your family photo's on a laptop.
 - ❖ Make two separate backups
 - ❖ Keep one set at a relatives or in the cloud
 - ❖ Do this urgently and with frequency.
- ❖ Run Anti-virus scans every week.
- ❖ Bank online using your iPad.
- ❖ Block nasty web sites from your house.
- ❖ Assume everything on the internet is a scam and work backwards.
- ❖ Don't click on links from within email - ever !!
- ❖ Nice long strong passwords on everything.
- ❖ Disable in-app purchases on XBOX , iPad, Android, Playstation Network.
- ❖ Manage your social media profile - ask a friend to audit what they can learn about you.
- ❖ Never, ever, use public WiFi to access personal data. Emails / Banking / Social etc...

Useful Links

- ❖ Anti-Virus. Free www.avira.com
- ❖ Anti Malware - Free www.malwarebytes.com
- ❖ OpenDNS - Family Shield - 208.67.222.123 , 208.67.220.123
- ❖ Free office applications www.libreoffice.org
- ❖ Recover a horrid Windows infected PC www.bleepingcomputer.com/download/combobox
- ❖ Give old hardware a new lease of life. Install LINUX over old windows XP installations. www.linuxmint.com (free)
- ❖ Irish internet safety website <http://www.internetsafety.ie/>
- ❖ Web wise internet safety <http://www.webwise.ie/>
- ❖ Online cloud storage - free www.copy.com or www.dropbox.com

The Internet is the world's largest library. It's just that all the books
are on the floor.

(John Allen Paulos)

izquotes.com

Thank you for listening..

Questions ?

Ask anything to do with
technology.
