



Computer Safety:

Ways to Avoid Computer Interference

Hello!

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- * Working with computers, internet security and technology for over 30 years
- * 10 years at U of M (Technology Support, Director of Network Services - AIS)
- * Partner at gofast.net – pioneering Twin Cities-based Business Internet Service Provider in 1996
- * Member: St. Paul Chamber of Commerce, Better Business Bureau
- * Clients: Hundreds of Twin Cities businesses and organizations including: Best Buy, Geeksquad, Bush Foundation, Wilder Foundation, State of MN, U of Mn, City of St. Paul, Artspace, Bachmans, St. Paul JCC
- * Member: Bethlehem Covenant Church



Computer Safety: Ways to Avoid Computer Interference!

- * Background and Overview (How did we get here?)
- * Understanding the terms
- * Safe computing!
 - * Typical threats and how to recognize them
 - * Tips and Options for safe computer use
- * Resources and how to stay ahead of the game
- * Question and Answer

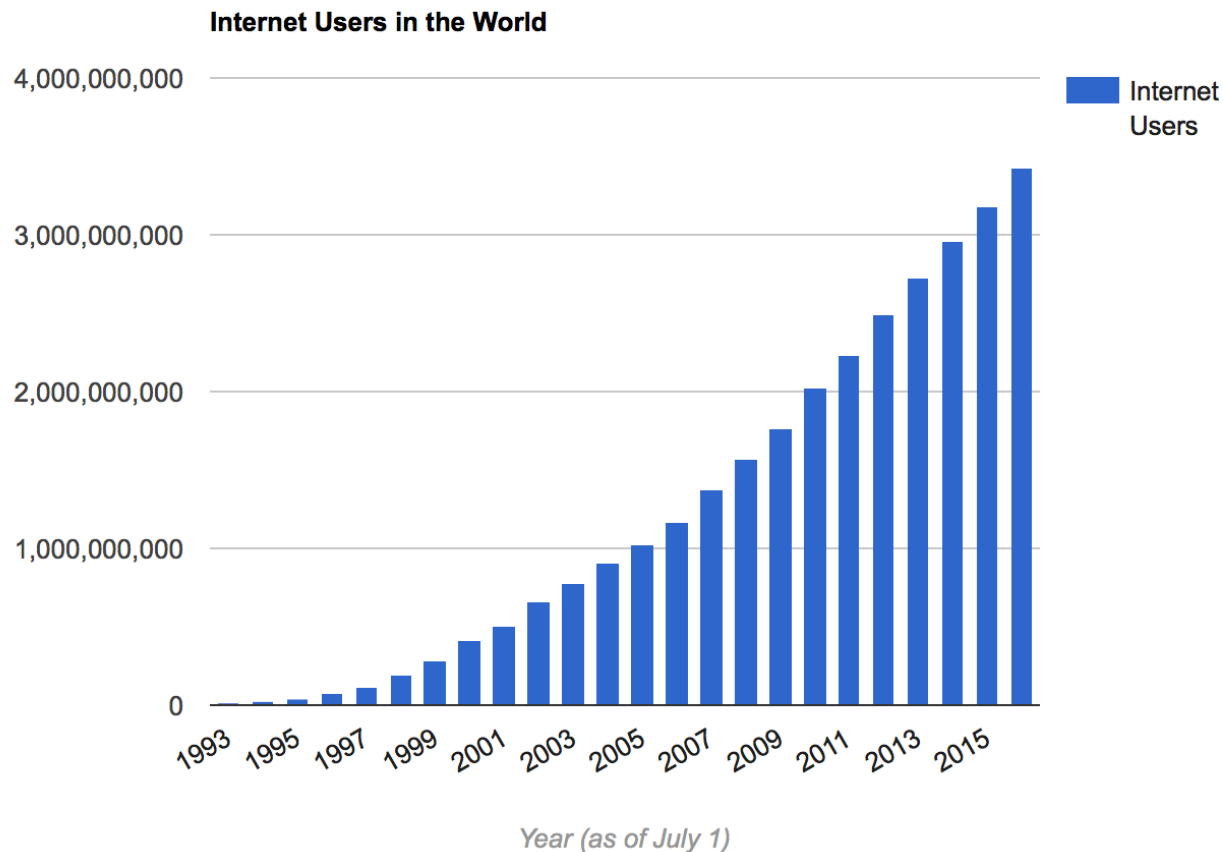
Quick Poll

- * How many of you use the internet?
- * How many of you use the internet daily?
- * How many of you have ever had a virus or other security issue?
- * How many of you have questions on how all of this works?

Background: Internet growth

- * Around 40% of the world population has an internet connection today. In 1995, it was less than 1%.
- * The number of internet users has increased tenfold from 1999 to 2013.
- * The first billion was reached in 2005. The second billion in 2010. The third billion in 2014.

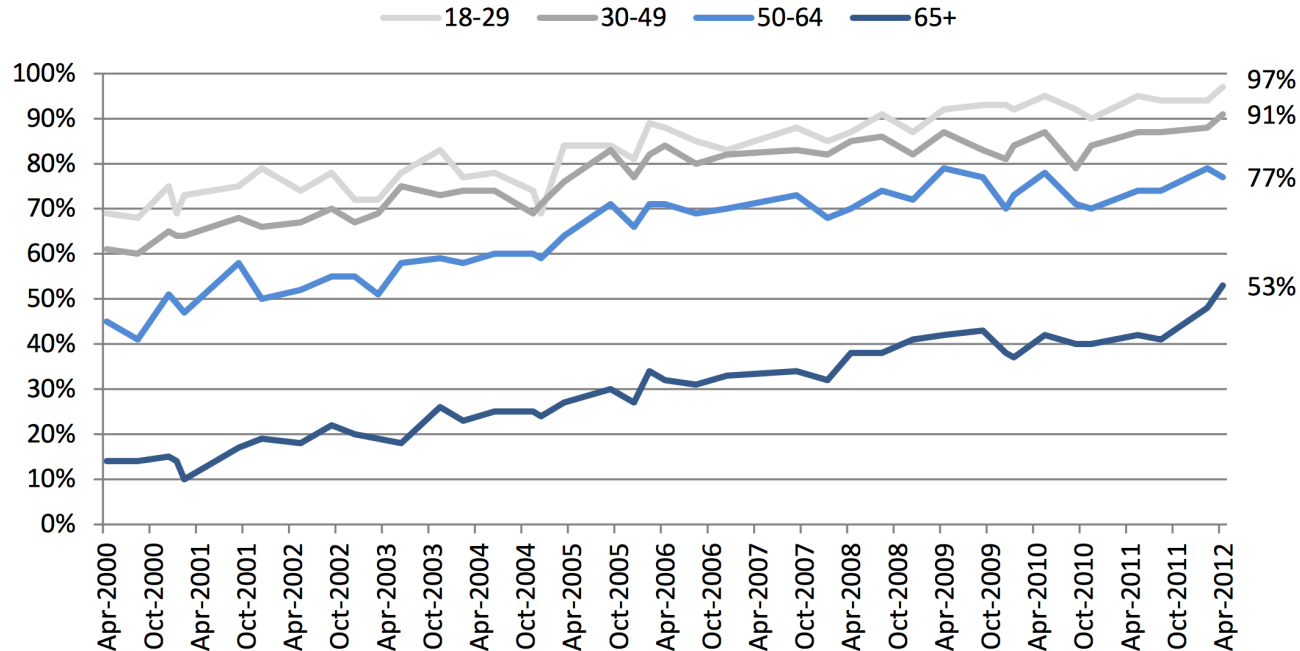
Background: Internet Growth



Background: Technology Use

Internet use by age group, 2000-2012

% of American adults age 18+ who use the internet



Source: Pew Internet & American Life Project Surveys, April 2000-April 2012.

More: <http://pewinternet.org/Trend-Data/Internet-Adoption.aspx>

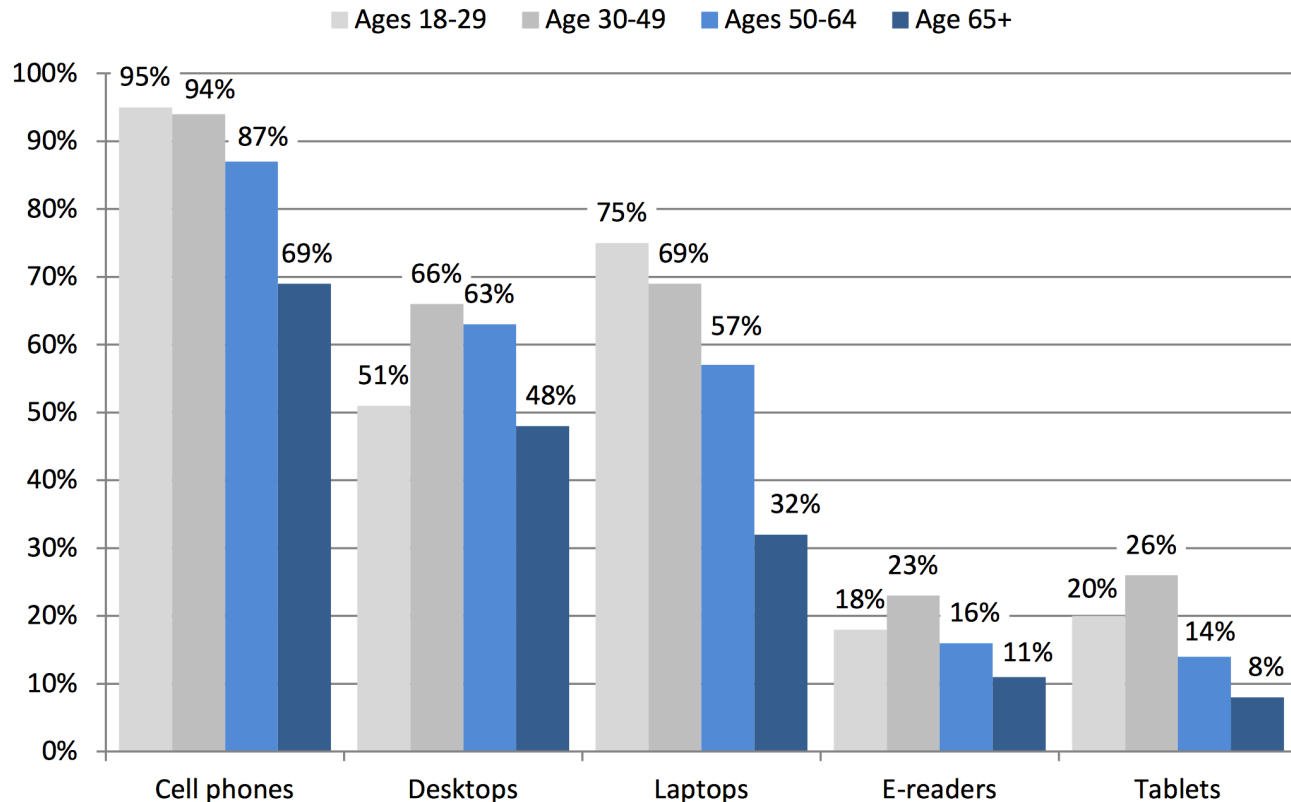
Background: Technology Use

- * For the first time, half of adults ages 65 and older are online
- * Seven in ten seniors own a cell phone, up from 57% two years ago

Background: Technology Use

Gadget ownership by age group

% of American adults in each age group who own each of the following gadgets



Source: Pew Research Center's Internet & American Life Project January 20-February 19, 2012 tracking survey of 2,253 adults age 18 and older. Interviews were conducted in both English and Spanish, by landline and cell phone. Margin of error is plus or minus 2.4 percentage points for results based on the total sample.

Background: Technology Use

- * Seems that everyone (and everything) is online
- * Social media and Communications standard
- * Original internet Academic network
- * 1996 Telecommunications act
- * New commercial frontier (as much about commerce as technology)
- * The future!

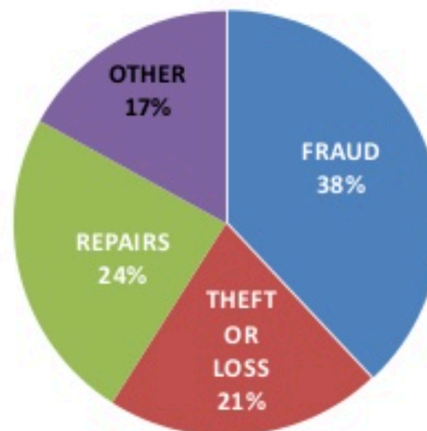
Background: Online Crime



Above Costs are given for individual victim Organisations.

\$113 BN

Global Price Tag Of
Consumer Cyber Crime:



83% OF DIRECT FINANCIAL
COSTS ARE A RESULT OF
FRAUD, REPAIRS, THEFT AND
LOSS

USD \$298

AVERAGE COST PER VICTIM

Background: Who are the Criminals?

- * **“script kiddies”** - motivated by “immaturity, ego boosting, and thrill seeking.” limited technical knowledge and abilities who run precompiled software to create mischief, without truly understanding what the software is accomplishing ‘under the hood.’ ”
- * **“cyber-punks”** disrespect for authority and its symbols and a disregard for societal norms. Driven by the need for recognition or notoriety from their peers and society
- * **“hacktivists”** justify their destructive behavior, including defacing websites, by labeling [it] civil disobedience and ascribing political and moral correctness to it.”
- * **“thieves”** primarily motivated by money and greed. Attracted to credit card numbers and bank accounts that can be used for immediate personal gain. Organized crime
- * **“virus writers”** drawn to “the mental challenge and the academic exercise involved in the creation of the viruses.”
- * **“professionals”** often ex-intelligence operatives “involved in sophisticated swindles or corporate espionage.”
- * **“cyber-terrorists”** who are essentially warriors, often members of “the military or paramilitary of a nation state and are viewed as soldiers or freedom fighters in the new cyberspace battlefield.”

Background: Online Crime

Why are they bugging me?? Why is my e-mail or facebook, etc. so interesting to them?

- * Sometimes direct fraud or theft
- * Sometimes “Power of the Aggregate”
 - * Zombies, Botnets (DDoS)
 - * Credit card number databases
 - * Identities
 - * Harvesting resources and information

Background: Online Crime



Nothing new under the sun!

Common Scams

- * Nothing new under the sun!
- * Confidence trick, 'confidence-man', grifter
- * Gain your trust or confuse your judgment to elicit a response
- * Fix your computer?... (pulling a spark plug)
- * Spanish prisoner (16th century)
 - * Too good to be true...
 - * Contrived offense...
- * With technology, just really efficient now...
- * Direct access into your home...

Common Scams – Phishing E-mails

Phishing attacks come in many forms and most often try to spoof services that you're likely familiar with to give you a false sense of security. These can include:

- * Bank notices
- * Security notices
- * Shipping notices
- * Software updates
- * Order confirmations
- * iTunes receipts
- * Tax information
- * ...and more!

Common Scams – Phishing E-mail

Be suspicious of any email that:

- * asks you to divulge personal information
- * isn't personalized (uses generic greetings such as 'Dear Customer' or your email address)
- * asks you to open or download an attachment
- * has links that don't match what is displayed (when you hover over the link with your mouse)
- * has a false sense of urgency
- * is poorly written

Common Scams: Phishing E-mail

- * Fake e-mail from legitimate appearing source (FedEx, Wells Fargo, IRS)
- * Solicitation to participate in money transfer (Nigerian Scam, 419 scam)
- * Spanish Prisoner (your grandson has been kidnapped)
- * Congratulations, you've won!!!
- * Click here to be removed!
- * Attachments

Terms

- * **URL** – Uniform Resource Locator. A web address. (eg. <http://www.google.com>)
- * **http and https** – Hypertext Transport Protocol. How web pages are encoded and transmitted. ‘s’ is for ‘Secure’
- * **SSL** – Secure Sockets Layer. Technique for encrypting data in transit on a network
- * **‘Client’** – an internet program that you use on your computer (e-mail client, web client, etc.)
- * **‘Server’** – an internet program that serves information to clients (e-mail server, web server, etc.)
- * **Browser** – a web client. Examples are Internet Explorer, Firefox, Chrome, Safari

Common E-mail Scams: Example

-----Original Message-----

From: Royal Bank/Banque Royale [<mailto:rbcbcr@royalbank.net>]

Sent: February-11-16 3:56 PM

To:

Subject: Sign-in Alert; Action Required

Dear john.smith@sheridancollege.ca, Beware of greetings that use your email address in the salutation

Your RBC online banking account **as** been defined as inactive. We define an inactive account as an account that hasn't logged in recently. Inactive accounts pose a specific risk to financial institutions.

typos can be a red flag as to the legitimacy of an email

RBC is committed to safeguarding our customers' hard-earned money. That's why we periodically review accounts and, as a prevention measure, prevent any further transactions from being made on inactive accounts by:

- Freezing inactive accounts which have a credit balance and marking them as dormant.
- Closing inactive accounts which have a zero balance.

We'll always attempt to contact you in writing to ask if you wish to keep an account open and active before freezing or closing it. We consider each account in isolation when determining whether it's inactive; therefore any other accounts you hold with us won't be frozen if they're still in use.

To keep your accounts active please download and complete the attached encrypted activation certificate and submit all pages within three (3) business days. **Be wary when asked to open and/or submit attachments**

If your account has been frozen and marked as dormant, any money in your account will remain there, and you'll continue to earn any interest that's due to you. However, you won't be able to make any transactions on it without contacting us and, in certain situations, providing acceptable identification.

We'll continue to send you statements and attempt to contact you to remind you of the status of your account.

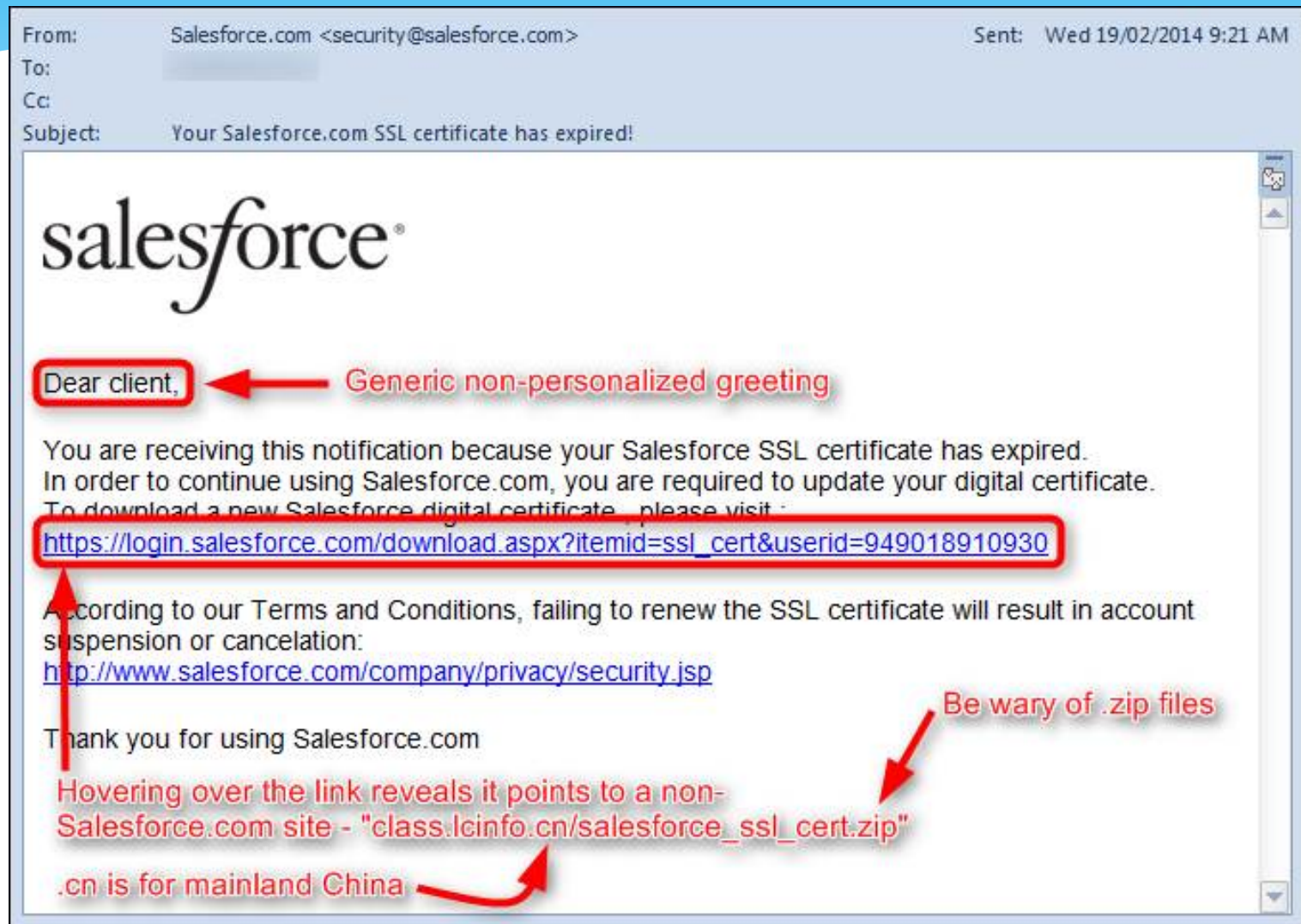
Thank you for choosing RBC Royal Bank Of Canada. We look forward to sharing your success

Brenda Hall
RBC Accounting Manager
Financial Security Department

Common E-mail Scams: Example



Common E-mail Scams: Example



Common E-mail Scams: Example



Common E-mail Scams: Example



Internal Revenue Service
United States Department of the Treasury

You have received a complaint in regards to your business services.
The complaint was filed by Mr./Mrs. Jacinto LABORICO on 05/29/2013/

Case Number: 541578889937

Instructions on how to resolve this complaint as well as a copy of the original complaint are attached to this email.

Disputes involving consumer products and/or services may be arbitrated. Unless they directly relate to the contract that is the basis of this dispute, the following claims will be considered for arbitration only if all parties agree in writing that the arbitrator may consider them: Claims based on product liability; Claims for personal injuries; Claims that have been resolved by a previous court action, arbitration, or written agreement between the parties.

The decision as to whether your dispute or any part of it can be arbitrated rests solely with the IRS.

The IRS offers a binding arbitration service for disputes involving marketplace transactions. Arbitration is a convenient, civilized way to settle disputes quickly and fairly, without the costs associated with other legal options.

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Common E-mail Scams: Example

Date:Wed, 2 Mar 2016 15:51:43 +0000 (UTC)

From:IRS <irsoffice1@comcast.net>



Please be notified that your Form 1040 information needs to be updated as we process 2016 Tax Refund Season.

This process is compulsory for all Tax Payers to avoid being over charged or delayed by IRS.

[Click here to update your Tax information.](#)

Regards,

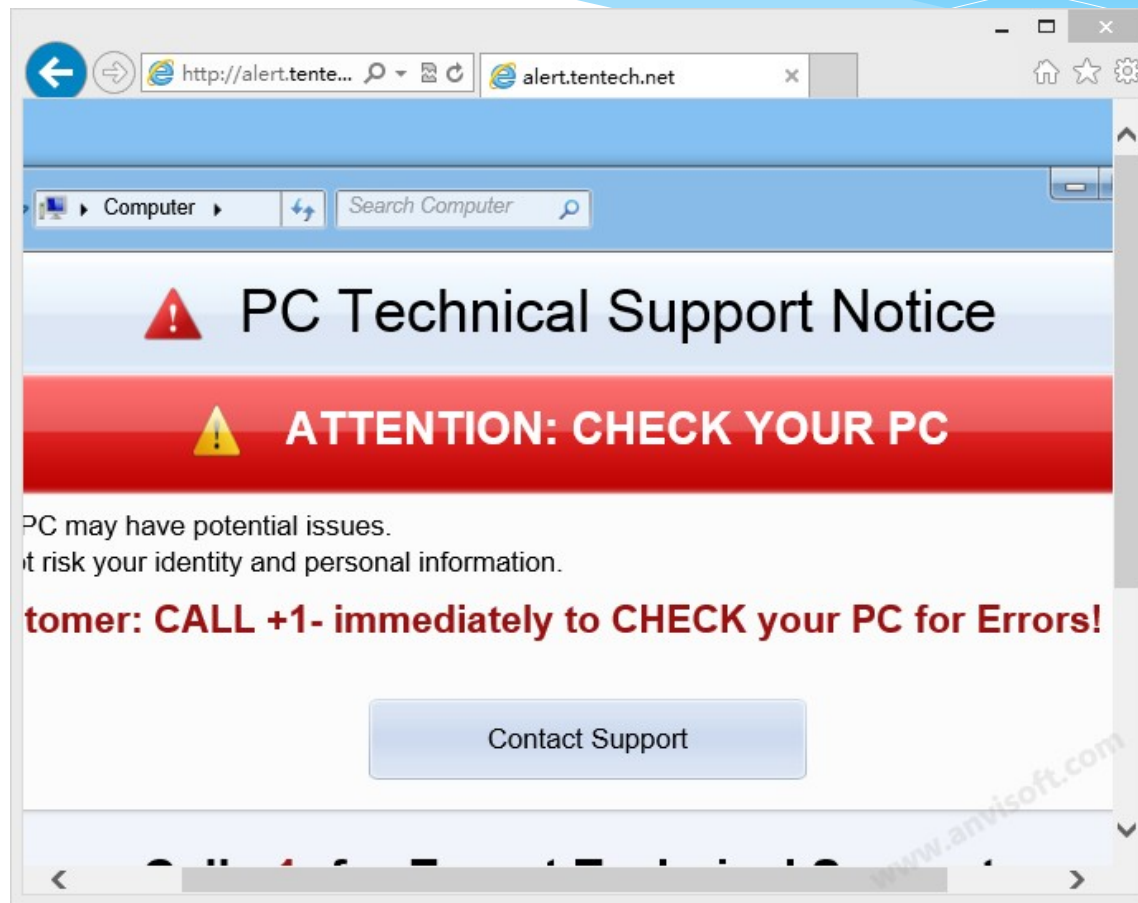
Common Scams – Common Sense

- * Stop, Think, Connect!
- * Does it add up?
 - * Do I have any business relationship with this e-mail sender?
 - * Did I recently do any business with this sender?
 - * Contact them using a known number or e-mail address (not from the e-mail)
 - * If you are at all suspicious – don't click links or attachments!!

Common Scams: Pop-Up Browser Messages



Common Scams: Pop-Up Browser Messages



Common Scams: Phone Scams

- * 'Official' call from Microsoft
- * 'Official' call from the IRS
- * Never to be trusted, just hang up
- * No need to be polite
- * Local number or area code has little if any meaning

Tips and Options

- * Technology designed to be disposable (sadly) – don't hang on to old technology
- * Plan for cost-of-ownership (maintain)
- * Think about what you really want to use your computer for
 - * E-mail
 - * Web browsing, Internet videos
 - * Pictures
 - * Writing

Options – Traditional PC

- * Traditional computer systems – Desktop Computers and Laptops



Options: Traditional PC

- * Consider 'Total Cost of Ownership'
- * Operating system must be kept current (Microsoft Windows Updates, Mac OSX Updates)
- * 'General Purpose' computing
- * Must be supported and licensed
- * Must have anti-virus
- * Understand how to do Windows updates or Mac updates
- * Consider alternative device (smart phone, tablet, chromebook)
- * 3 – 5 years expected utility

Options: Tablet

- * Tablet Computer (Apple iPad, Samsung Galaxy, etc.)
 - Lower cost
 - 'Locked Down' less susceptible to viruses
 - Limited function (but still very nifty)
 - Highly portable
 - Internet dependent!
 - Camera



Options: Smart Phone

- * Smart Phone (Apple iPhone, Android, etc.)
 - Lower cost
 - 'Locked Down' less susceptible viruses
 - Limited function (but still very nifty)
 - Highly portable
 - Internet dependent!
 - Mobile communications
 - Camera



Options: Chromebook

- * Google Chromebook
 - Laptop 'lite'
 - Lower cost
 - 'Locked Down' less susceptible to viruses
 - Limited function (but still very nifty)
 - Highly portable
 - Internet dependent!
 - Mobile communications
 - Camera



Options: Be this Guy!





"You caught a virus from your computer and we had to erase your brain. I hope you've got a back-up copy!"

Resources

Local Computer Repair:

- * Technical Reinforcements: <http://www.reinforceme.com>
- * 612-720-0233

- * Chipheads: <http://www.chipheads.com>
- * 612-866-8800

- * MacMen <http://www.macmentech.com>
- * (612) 345-8005

- * Angies List

Q & A

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