

PC Lifecycle: Purchase, Use, Disposal

Everything you always wanted to know about computers but were afraid to ask.

Pre-Purchase

- Laptop or Desktop
- Intended Use
- Upgradability

Desktops

Pros:

- Typically cost less
- More upgrade options
- Easier to Repair / Replace components
- Typically more powerful compared to portables

Cons:

- Not easy to travel with
- Take up more space

Laptops / Notebooks

Pros:

- Small Form Factor
- Good for Travelling

Cons:

- Not many upgrade options
- Difficult to repair / replace parts
- Typically less powerful than Desktop

Warranty Considerations

- Extended warranty for laptops
- May not cover accident damage!
- Most repairs require item to be sent to authorized service center
- Some warranties include onsite repairs

Specifications

- Screen size -> Go look at the screen first!
 - Touchscreen Options
- CPU speed & number of cores
- Memory -> More is better!
 - You may be able to increase memory for a cheaper price by buying & installing it yourself
 - Crucial.com
 - 4GB to 8GB
 - **32-bit versions of Windows are limited to 4GB**
- Hard drive capacity
- Peripheral connections
 - USB (low count can be augmented with hub)
 - HDMI (hook to modern TV!)
- Expansion options

Operating System

- Current Windows versions
 - Windows 7
 - Windows 8 / 8.1
 - Windows 9
- 32 versus 64 bit
 - Memory Limits
- Other operating systems
 - Mac
 - Linux
 - Android

Legacy Stuff

- Will my old printer work with this?
- Will my favorite software run on this?
- Other peripherals (webcams, cameras, etc.)
- Network devices (routers, switches, etc.) almost universally work regardless of operating system or hardware age.

What Else Do I Need?

- An external hard drive for backups?
 - Online alternatives
 - Might get by with a USB thumb drive
- Replacement for legacy peripherals (printers)
- Laptops
 - Mouse
 - Bag
- Battery Backup (UPS)
- Surge protector
- Blank DVD's for creating recovery media
- Office software

New Computer Day One

- Did I get recovery media?
 - Many do not include media
 - Most require you to create it (may need blank DVD's)
- Is there 'bloat-ware' installed that I can remove?
 - Norton blah-blah-blah
- Before you begin surfing!!!!!!
 - Antivirus installed (several free options)
 - Backup strategy in place (external HD, online)
 - All updates applied
 - Windows updates set to run automatically
 - Java
 - Flash
- Save your boxes for a week
- Put your receipt and recovery media in a safe place
 - WHERE YOU CAN FIND IT!
- Does the manufacturer have a registration process to start the warranty?

Transferring from Old PC

- Built-in Utility included in Windows 7 and newer
- Manually move files
- May need to call in a pro

Free Antivirus Programs

- Avast!
- AVG
- Avira
- Bitdefender
- Comodo
- Forticlient
- Immuneset
- Kingsoft
- Panda Cloud

Free Backup Software

- Windows Backup & Recovery (built-in)
- Easus ToDo Backup Free
- Crashplan+
- Fbackup
- Bittorrent Sync

Backup Device Options

- External Hard Drive
- USB Thumbdrive
- Cloud Storage
- NAS
- Email

Other Free Programs

- Malwarebytes Anti-Malware
- Spybot Search & Destroy
- Recuva file recovery
- Revo Uninstaller
- CCleaner

Daily Operation

A healthy dose of paranoia can go a long way...



"It's on the internet,
it must be true."

-Kermit

Repeat after me:

- I will not download every game, program, picture, video, screen saver, or music file that I come across.
- I will only download and install programs that have been properly researched and / or vetted.

Think Before You Click



Email Safety

- Just because it says it's from Aunt Gertrude doesn't make it so
- Include a personalized message when sending attachments
- Don't open emails or attachments from people you don't know!
- Be cautious of attachments from people you do know!
- Use an online email client rather than a desktop client.
 - My not be able to send email when traveling with desktop client
- Use two-step verification
 - <http://www.google.com/landing/2step/#tab=how-it-works>

Online Account Safety

- Don't use the same username & password for everything!
 - Once one account is compromised, others may become easier to hack.
- Don't use simple passwords
 - Words that can be found in a dictionary
 - Passwords that contain fragments of your personal info e.g. name, DOB, etc.
- Consider any word that can be found in a dictionary as insecure
- Use special characters whenever possible
- Use long passwords
- Too many to remember? Right them down!
- Don't let online accounts store credit card information
!!!!!!!



Are Strong Passwords Enough?

- Regardless of password strength, we still rely on someone else to protect our data.
- Website Credentials:
 - Passwords are typically stored in a database
 - The password is typically encrypted
 - There are several encryption methods
 - Some encryption methods are more secure
- Sometimes passwords are not encrypted
 - Starbucks iPhone App
 - Yahoo! Contributor Network (450,000)
 - Cupid Media (42 million)
- Data Breaches happen frequently

Travelling Safety

- Most of us allow the browser to remember our credentials so we can login easier on websites.
- If your laptop is stolen while traveling, and you allow the browser to remember passwords...
- Make sure you have a password on your computer login screen
- Clear the browser completely before you travel
- Make sure there are no unnecessary files on your device, and that the ones that are important are backed up.
- If using public WiFi, assume that everything you do can be seen by anyone
- Avoid online transactions while traveling
- If your device is stolen, reset ALL of your online passwords as soon as possible



End Of Life

- Giving away an old computer might not be as helpful as it seems
 - Older hardware might not be able to run current software.
 - Older operating system might be more vulnerable to security issues.
- In many cases, it is best to dispose of older computer hardware rather than selling or giving away.

The Hard Drive

- Regardless of how the PC is to be disposed, the hard drive should be cleaned.
- Moving something to the Trash or Recycle Bin does not really delete it.
- Deleting something may not be permanent.
- Reloading the operating system isn't enough to ensure old data is no longer retrievable.
- Hard drive can be physically pulled and destroyed.
- Software can be used to render data irretrievable (scrubbing).
- It may be possible to re-use your old hard drive as an external device with a new computer.



Scrubbing a Hard Drive

- Software Solution
 - Darik's Boot And Nuke
 - <http://www.dban.org>
- Hardware Solution
 - Large Hammer
 - Target Practice