Mac OS 10.13
High Sierra

Introduction:

- High Sierra 10.13 is the latest Macintosh operating system from Apple.
    - Previous Systems:
        - OSX 10.5 Leopard
        - OSX 10.6 Snow Leopard
        - OSX 10.7 Lion
        - OSX 10.8 Mountain Lion
        - OS X 10.9 Mavericks
        - OS X10.10 Yosemite
        - OSX 10. 11 El Capitan
        - Mac OS 10.12 Sierra

- Yosemite, Mavericks, and El Capitan, Sierra, and now High Sierra are using locations instead of Big Cat Names

- Unlike 10.8 and before; THIS ONE IS FREE!

Requirements:

+ Must be a 64 bit Intel based Macintosh with 64 bit EFI. Last Power PC version was OSX 10.5 Leopard

+ Models supported:
    + iMac (Late 2009 or newer)
    + MacBook (Late 2009 or newer)
    + MacBook Pro (Mid 2010 or newer)
    + MacBook Air (Late 2010 or newer)
    + Mac mini (2010 or newer)
    + Mac Pro (Mid 2010 or newer)

+ 2GB RAM memory (not enough) , at least 14.3 GB available Hard drive space

Upgrading:

+ A common question is can you upgrade from versions before the last one OS X 10.12 Sierra? Yes with a couple of caveats:
    + Apple says you now must be running at least 10.8 to upgrade.
    + If you are still running 10.6.8 Apple suggests you will need to upgrade to 10.11 first.
    + 10.4 and 10.5 users probably have machines too old to run High Sierra
        + See Appendix for El Capitan OS X 10.11 requirements

+ Yes OSX 10.7 did offer a $69.95 Thumb drive, but Apple has dropped that option on subsequent versions. Online only.

Upgrading (cont'd):

+ Check to make sure that your software, especially third party software (non Apple) will work in MacOs 10.13 HighSierra
    + Check Vendors websites. A good resource is Http://www.roaringapps.com Note a downside is that some software has not had user input on them or they don't specify versions.

+ If you are updating from OSX 10.6 or earlier, you may have PPC only programs. This requires a optional install of Rosetta (10.6) or was built in earlier. You can't run these 10.7 and beyond
    + One option is to have 10.6 system on a external hard drive to boot into when you need to run PPC programs (That's what I do) or run a Virtual machine with OSX 10.6 server. This is a advanced topic perhaps we can do it as a later presentation.

Tips:

+ **Have a least one, preferably more Backups before updating!**

+ Power off and remove external Hard drives before installation.
    + Hard drives have been messed up, and external Hard drives could hang up installation process. It happened to me on OSX 10.8

+ It is a big download ~ 5+ GB! It will take awhile.

+ Some macs will get an initial 19 MB installer that updates firmware first. Then the main upgrade will be downloaded.

+ The post download installation will take some time too

Tips (cont'd):

+ Clicking on the Install button will force a restart
  + This time around the progress bar was saying 30 minutes for several, then advancing more quickly than elapsed time, then slowing again. .. Approximate time; not exact
  + Will pause a few minutes on "completing installation"

+ There will be a second forced restart:
  + This will also take a few minutes, a progress bar is shown. You will then see your finder window show up.

+ You may see additional updates after you install High Sierra.

+ You will be asked will you want to use SIRI (pre Sierra upgrade), and about Optimized storage(pre Sierra upgrade), and possibly have you sign into iCloud.

Why Upgrade?

+ To Use and enjoy the new features in MacOS 10.13! Have the "latest and greatest!"

+ However I know many have strong opinions on not upgrading
    + "If its not broken don't change"
    + But the issue is the rest of the industry does change and fast
        + Yes you still can drive a 1950's car today, but something like a Mac Plus is more like a Roman Ox cart!
    + Turbotax 2017 will require 10.11 El Capitan
    + Dropbox requires OS X 10.9 Mavericks
    + Itunes 12.7 requires 10.10.5 Yosemite
    + New Skype requires 10.10 Yosemite

Why Upgrade? (cont'd)

+ Security

+ Apple is only supplying current updates for the following OS's:
    + 10.11 El Capitan
    + 10.12 Sierra
    + 10.13 High Sierra

+ I mentioned the Meltdown-Spectre vulnerability in my beginners presentation. Still no updates for Mac OS's other than those in the list above!

When to Upgrade?

+ Question is hard to answer.

+ Software can't be perfect out of the gate.
    + If you wait till 10.X.1 or better 10.X.2 version a lot of large bugs are fixed
    + Ideally all third party software vendors would have updates ready to go with the release date of a new Mac OS.
        + However big vendors can run into issues of bureaucracy etc.
        + Small vendors (1 or few persons) may have too much work to finish on time.
    + But if you have more than one Mac, select one for the upgrade, then evaluate upgrading the rest.

What's New? - Introduction

+ There is not really a lot of new features immediately obvious to the new user of High Sierra
    + Much is "behind the scenes"

+ There are visible change to the supporting apps that come with the OS.
    + Safari
    + Photos
    + Notes
    + Others.

New Features- APFS File System

+ Designed to eventually supersede the old HFS+ file system. Will continue to support older file systems and other systems.

+ Has new native encryption support, faster directory sizing (ie get info), improved data integrity, snapshots, space sharing, and improved file system fundamentals.

+ It does not change files, a PDF file is a PDF file, Word DocX is a Word DocX file, etc.

+ You can still move and share files with other Macs without APFS, using email, iCloud drive, drive sharing, dropbox, flash drives, etc

New Features- APFS File System(cont'd)

+ Upgrading to High Sierra will automatically format internal SSD drives (solid state drives) to APFS. All other types of drives and external drives will not be changed.

+ APFS does not support Fusion drives yet. Fusion are combo drives with spinning hard drives and a SSD drive combined. You could change spinning hard drives to APFS.

+ Some caveats:
    + APFS is optimized for SSD drive
    + Time machine will continue to allow you to backup your newly converted APFS boot drive, but cannot write to an external APFS drive.
    + Bootcamp will work with APFS, but the alternate system you switch to in bootcamp (say Windows 7) can't see the APFS drive.
    + If you have a portable hard drive and use it with many different macs, if you format it for APFS only Mac OS 10.13 will see it. (maybe 10.12.4)

New Features- HEVC and HEIF

+ **HEIF:**
    + High Efficiency Image Format
    + Smaller file sizes for the same quality

+ **HEVC:**
    + High Efficiency Video Codec
    + Called H.265
    + 40% Better on 4K video

+ **Both will require 2015+ 5K iMac or other Macs 2016 and later**

New Features –Metal 2 Graphics.

+ Faster Graphics performance than original Metal
    + Machine Learning (CoreML)
    + External Graphics Processor Units
    + VR support - Games, Physical Task learning, etc

+ Support for Metal 2 only on these models:
    + Macbook (Early 2015 or newer)
    + Macbook Pro (2012 or newer)
    + MacBook Air (2010 or newer)
    + Mac Mini (late 2012 or newer)
    + iMac (2012 or newer)
    + Mac Pro (Late 2013)

Some Application Updates

- **Notes:**
  - George Wilde covered this in his presentation. Tables and the ability to pin notes to the top of your list.

- **Photos:**
  - Adam Christianson covered this in his presentation.
  - Reorganized Sidebar
  - New Imports menu
  - New curves tool and selective color tool
  - New Live editing tools
  - New Projects extension

Other New Features

+ Airplay 2 : Adds ability to stream audio to multiple speakers

+ Safari 11:
    + Intelligent tracking prevention- more intelligent and dynamic than the previous "allow cookies from websites I visit"
    + Individual Website preferences. (Demo)
    + Available for 10.12 Sierra and 10.11 El Capitan

+ More natural voice in SIRI

+ EFI check (should be up to date with new system updates but not always true)

Other New Features (Cont'd)

+ Siri can learn your preferences with Apple music

+ Spotlight can now track your flight. Get arrival times, gate and terminal info, delays.

Appendix:

+ El Capitan OS X 10.11 Requirements:
  + iMac (Mid-2007 or later)
  + MacBook (13-inch Aluminum, Late 2008), (13-inch, Early 2009 or later)
  + MacBook Pro (13-inch, Mid-2009 or later),
  + MacBook Pro (15-inch or 17-inch, Mid/Late 2007 or later)
  + MacBook Air (Late 2008 or later)
  + Mac mini (Early 2009 or later)
  + Mac Pro (Early 2008 or later)
  + Xserve (Early 2009)