

# TEaCH IT Literacy Workshop

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These notes are a supplement to the TEaCH IT Literacy Workshop sponsored by CETL. The notes represent only a subset of topics covered in the workshop and the course IS 2101 “Computers and Your World.”

## Module 1: Hardware and System Software

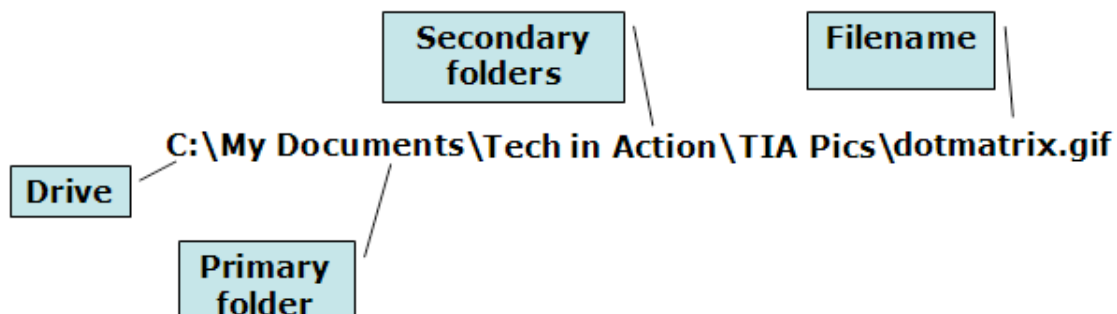
### Operating system basics (Windows)

I know how to save files to different locations (e.g., desktop, hard drive, USB drive).

*What we teach:*

- Saving files in various locations is an important part of using a computer
- There are many reasons to do this - most important is to make a back-up

### Fully Qualified Path Name



Fully Qualified Path Name of 'My Documents':

`C:\Documents and Settings\Username\My Documents`

## File suffixes indicate file type:

Extension	Type of Document	Application
.doc	word-processed	Microsoft Word
.docx	word-processed	Microsoft Word 2007
.rtf	word-processed, rich text format	Various word processors
.xls	spreadsheet/workbook	Microsoft Excel
.ppt	presentation	Microsoft PowerPoint
.pptx	presentation	Microsoft PowerPoint 2007
.mdb	database	Microsoft Access
.bmp	bitmap image	Windows
.zip	compressed file	WinZip
.pdf	portable document format	Adobe Acrobat
.htm or .html	hypertext markup language (web page)	Firefox, Internet Explorer, etc. (to view) Notepad, Dreamweaver, etc. (to edit)

## Files.kennesaw.edu

- KSU provides an Internet-based file storage system
- Available to faculty and staff
- Site is accessible at: <http://files.kennesaw.edu>
- Manual for how to use the site is available at:  
<https://its.kennesaw.edu/booklets/index.php> (under category of “Others”)

## The Data Hierarchy

Name	Abbreviation	Number of Bytes Approximate (Exact)	Relative Size
Byte	B	One	One character.
Kilobyte	KB	One Thousand ( $1024$ )	About half of a type-written, double-spaced page.
Megabyte	MB	One Million ( $1024^2$ )	About 768 pages of typed text.
Gigabyte	GB	One Billion ( $1024^3$ )	About 786,000 pages of text (a stack of paper 262 feet high).
Terabyte	TB	One Trillion ( $1024^4$ )	A stack of typewritten pages almost 51 miles high.
Petabyte	PB	One Quadrillion ( $1024^5$ )	A stack of pages almost 52,000 miles high

# I know how to change BIOS settings such as the device boot order.

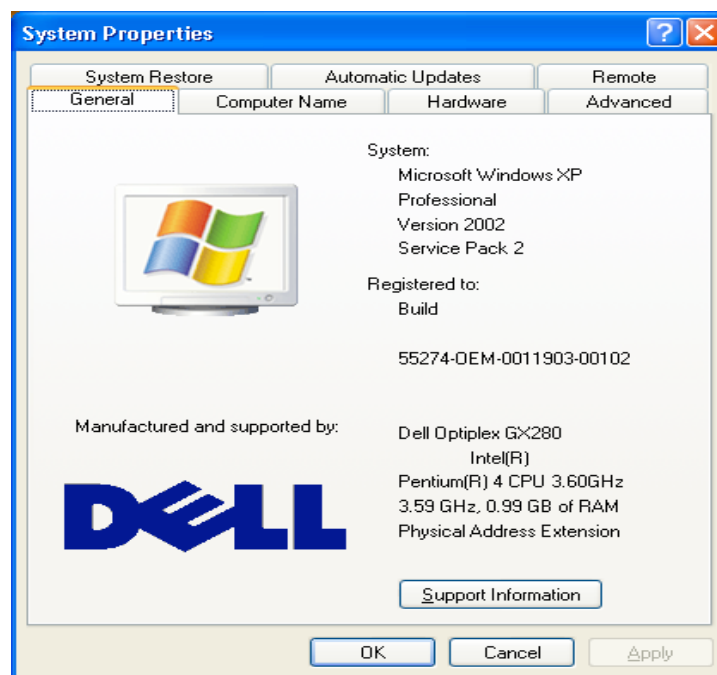
*What we teach:*

- BIOS stands for Basic Input Output System
- Accessible by special key during boot (power up)
- Special key varies by computer make and model (F2, F5...)
- Should only be used to change boot order
- Usually CD/DVD drive is set as first boot device
  - So the OS can be loaded when there is a problem with the hard drive

# I know how to determine how much RAM is installed in a computer.

*What we teach:*

- RAM stands for Random Access Memory
- Temporary storage - lost when computer is turned off
- Helps to make computer run faster
- Installed RAM amount is found under Computer Properties
- Right click on 'My Computer' → Properties



# I know how to change the settings on a computer using the Control Panel.

*What we teach:*

- Control Panel contains the Listing of System Resources for a Windows OS
  - Including how the mouse works, monitor characteristics, network options, other hardware device drivers
- Accessed under Start → Settings
- Be careful when you access any of the options in the Control Panel
- Training is supplemented with a module from computer based training program [Element K]

# I know how to defragment a computer's hard drive.

*What we teach:*

- Defragmentation rewrites files onto the hard drive so they are contiguous
- Speeds up computer
- Part of the set of Disk Cleanup tools
- Programs → Accessories → System Tools → Disk Cleanup
- Should be done periodically (no rules but every 6 months with average use)

# I know how to update an antivirus program's virus definitions.

*What we teach:*

- Computer viruses are a real problem
- The most common way to get a virus is through an email attachment
- Symantec antivirus software is made available to the KSU Community:  
<https://its.kennesaw.edu/downloads/>
- Antivirus programs must be updated on a regular basis
- To manually update virus definitions:

- Right click Symantec icon in the system tray

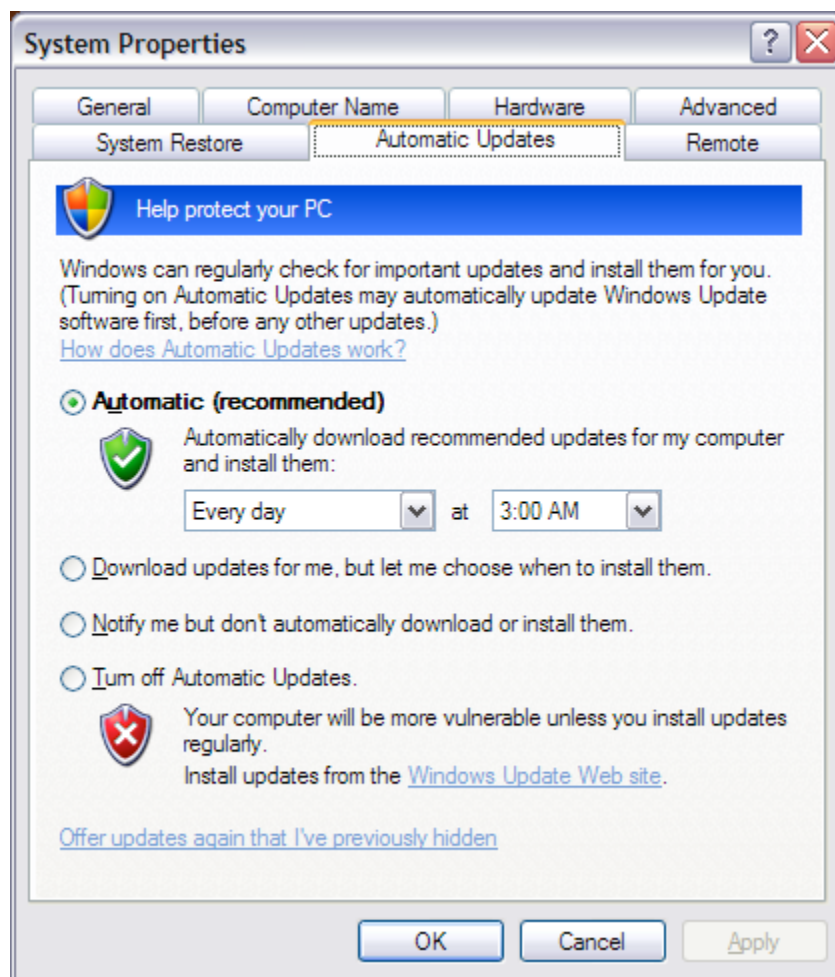


- Open Symantec Antivirus
- Click 'Live Update' button

# I know how to find and install security patches for a computer's operating system.

*What we teach:*

- Patches to Operating Systems are released periodically
- Top recommendation for aiding computer security
- Windows Updates can be set to occur automatically
- Right Click 'My Computer'
  - Choose Automatic Updates Tab



- Updates on a Mac: <http://docs.info.apple.com/article.html?artnum=106704>

## Module 2: Productivity Software

Solving problems with Word, Excel, PowerPoint and Access

I know what the intersection of a row and a column is called in a spreadsheet.

- In the course, we will be using Prentice-Hall's 'My ITLab' simulated computer based training program. We chose this specifically because it incorporates projects into the learning experience.
- However, the University System of Georgia subscribes to 'Element K' which is another computer-based training program. As a member of the KSU community, you have access to these programs. They may be found at:
  - <http://its.kennesaw.edu/> → Computer Train Website
  - (or <https://computertrain.kennesaw.edu/> )
- Training on Office 2003 is the default. For Office 2007, choose:
  - Catalog → Office Productivity
- Training on Operating System Basics, choose:
  - Catalog → Hardware, Networks & Operating Systems

## Module 3: Networks, the Internet and Information Literacy

### Information Literacy

I can distinguish reputable from non-reputable sources of information on the Web.

*What we teach:*

- Evaluating Web Sites – General Questions to Ask (<http://www.library.jhu.edu/researchhelp/general/evaluating/> )
  - Authorship
    - Who is the author of the article or Web site sponsor?
  - Publishing body
    - Who is sponsoring the Web site?
  - Point of view or bias
    - What audience is the site geared toward?
    - Is the site biased?
    - What are the objectives and what is the purpose?
  - Referral to other sources
    - Are links available?
  - Verifiability
    - How does the search engine used to find the source include links in its index?
  - Currency
    - Is the information current?
- Information Literacy Tutorials using the theme 'Current Internet Issues'
  - <http://tilt.lib.utsystem.edu/intro/registration.htm>
    - Choose guest



## I know the difference between a search engine, a subject directory, and a meta-search tool.

*What we teach:*

- Search engines utilize databases of indexed Web pages
- Database is built through spiders that 'crawl' the web looking for updates and new pages
- What they find is inserted into the listing of Web pages database
- Links may also be submitted by 'humans'
- Only slightly more than half of the pages on the World Wide Web are indexed
- Tutorial and Reference on Differences in Search Engines:  
<http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/SearchEngines.html>

## I know how to use a Boolean search to find information on the Web.

*What we teach:*

- Good tutorial on searching:
  - <http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/FindInfo.html>
- Tutorial on using Google:
  - <http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/Google.html>
- KSU Library Web Site:
  - <http://www.kennesaw.edu/library>

## Using the Internet

# I know how to delete the history of sites visited in a web browser.

*What we teach:*

- Steps to delete browser history - vary by browser type
- Part of the available configuration options browsers provide
- May be included under the privacy options
- Internet Explorer 6
  - Tools → Internet Options → Clear History button
    - You can specify number of days to keep pages in history
- Mozilla Firefox
  - Tools → Options → Privacy
  - Remember Visited Pages specifies number of days to keep
  - Private Data → Clear Now button clears currently retained history settings
    - History settings identified under Private Data → Settings button

# I know how to disable cookies in a Web browser.

*What we teach:*

- Cookie is a simple text file placed on your computer by a Web server
  - Can only be read by the Web server that wrote the cookie
- Cookies are stored in a directory on your hard drive
- Cookies are needed because Web servers maintain stateless interaction with browsers (they don't remember data)
- Cookies can be temporary session cookies (only used by the Web server during a specific session) or permanent (stored on a hard drive for days)
- General Cookie Rules:
  - Establish maintenance procedures for cookies on your main computer
  - Delete or clear cookies from public computers you use
- How to disable cookies:
  - Deleting cookies is best done via your Browser
  - Internet Explorer 6:
    - Tools → Internet Options
      - General Tab → Delete Cookies button
    - Tools → Internet Options
      - Privacy Tab – allows you to specify cookie ranking from deleting all cookies all the time to accepting all cookies all the time
  - Mozilla Firefox:

- Tools → Options → Privacy
- Show Cookies
  - Lets you delete all cookies or choose just specific ones
- Exceptions lets you specify sites from which to never accept cookies, always accepts cookies or only accept session cookies

## I know how to secure a wireless router.

*What we teach:*

- The focus is on wireless that uses radio waves to connect nodes on a network
- Wireless network topology includes wireless routers and/or access points as well as wireless network adaptors (ie pci or usb card) on PCs
- At home, the set up usually is a wireless router connected to incoming DSL or cable broadband service
- Most common wireless protocols are the IEEE 802.11 series and Bluetooth
- Bluetooth has a limited range [30 feet] and is primarily used for device to PC connectivity (ie printer, mouse, popular on cell phones)
- 802.11g is the most popular home wireless network protocol
  - 802.11b and 802.11g run in the 2.4Ghz range
- Most commonly used home wireless security include the encryption protocols:
  - WEP – Wired Equivalent Privacy uses a 10 character key for encryption.
    - The key is static (doesn't change) making it fairly easy to crack.
  - WPA - Wifi Protected Access is considered to be more secure
    - Requires a passphrase (supplied by user) & uses shared keys that change
- Resource for 'How to Setup a Wireless Network in the Home:'
  - <http://www.microsoft.com/athome/moredone/wirelesssetup.mspx>
- Tips for creating a secured wireless home network
  - <http://compnetworking.about.com/od/wirelesssecurity/tp/wifisecurity.htm>

# I know how to use an FTP or SSH program to transfer files from a local system to a remote system.

*What we teach:*

- FTP is an Internet protocol
- Has been associated with security breaches so KSU uses a Secure FTP connection
- For Secure FTP, you need a client – KSU uses an SSH client program
  - Available at <http://its.kennesaw.edu/softwaredownloads>
- FTP's primary use is to upload files to a Web Server
- KSU via 'students.kennesaw.edu' provides students with Web space

# I know when it is more appropriate to save an image as a GIF rather than a JPG.

*What we teach:*

- There are 2 main types of computer images, bitmap and vector
  - Images displayed by Web pages are Bitmapped images
  - A special plug-in such as Flash is needed to display vector graphics
- Vector images are made up of many individual, scalable objects defined by mathematical equations
- Bitmap images are made up of pixels in a grid.
  - Each data value is called a Pixel (Picture Element)
  - Each pixel's color sample has three numerical RGB components (Red, Green, Blue)
    - Black is a RGB value of (0, 0, 0) and White is (255, 255, 255).
- Most common bitmapped images are GIF ("jif") , JPG ("j-peg") or PNG ("ping")
- GIF image characteristics
  - Use lossless compression – losses color in compression
  - Supports animation
  - Only supports up to 256 colors (8-bit)
  - Most common on the Web
  - Sample optimization of a GIF image:

[http://r.netmechanic.com/gifbot/gifbot.cgi?url=http://science.kennesaw.edu/~jperez/images/porsche-logo.gif&site\\_name=NetMechanic&outputtype=1&robot=gifbot](http://r.netmechanic.com/gifbot/gifbot.cgi?url=http://science.kennesaw.edu/~jperez/images/porsche-logo.gif&site_name=NetMechanic&outputtype=1&robot=gifbot)

- JPG image characteristics
  - Uses *lossy* compression, losses detail in compression
  - Does not support animation


- Support up to 16 million colors
- Commonly used in digital cameras
- Optimization of a JPG image:

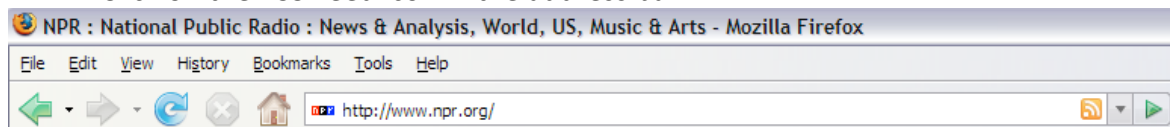
[http://r.netmechanic.com/gifbot/gifbot.cgi?url=http://science.kennesaw.edu/~jperez/images/Puppies-480x360.jpg&site\\_name=NetMechanic&outputtype=1&robot=gifbotv](http://r.netmechanic.com/gifbot/gifbot.cgi?url=http://science.kennesaw.edu/~jperez/images/Puppies-480x360.jpg&site_name=NetMechanic&outputtype=1&robot=gifbotv)

## Emerging Technologies in the Classroom:

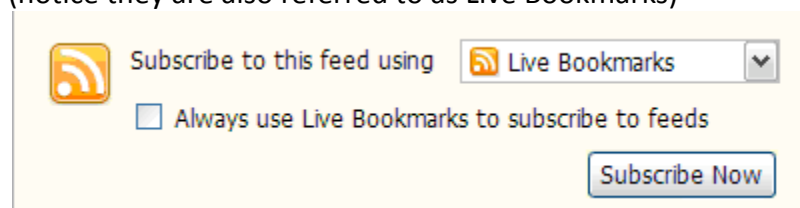


### RSS Feeds

- Really Simple Syndication
- Content is headlined in XML feeds and then syndicated to readers
- Considered a peer-to-peer dissemination of abstracted information
- Purpose is to deliver current and relevant information
- Creating an RSS Feed
  - Need a computer web server to maintain RSS feeds
  - Not standardized at KSU yet – hopefully will come out of ITS
  - Many programs are available some free, some not
- Reading an RSS Feed
  - Join or subscribe to the RSS feed community
  - Need a reader – known as an aggregator to access and display feeds
    - Although this feature is now included in Firefox and on the desktop of the new Microsoft Vista Operating System
  - To find an RSS feed, look for the News Feed Symbol 
  - Once subscribed to a feed, your RSS reader will periodically check for new postings
- Resource of Listings of Available RSS Feeds:
  - <http://www.masternewmedia.org/rss/top55>
  - <http://www.rssfeeds.com/>
- To try it out:
- Open the Firefox Browser.
- Go to the NPR (National Public Radio) site at <http://www.npr.org>
- Click on the RSS Feed icon in the address bar

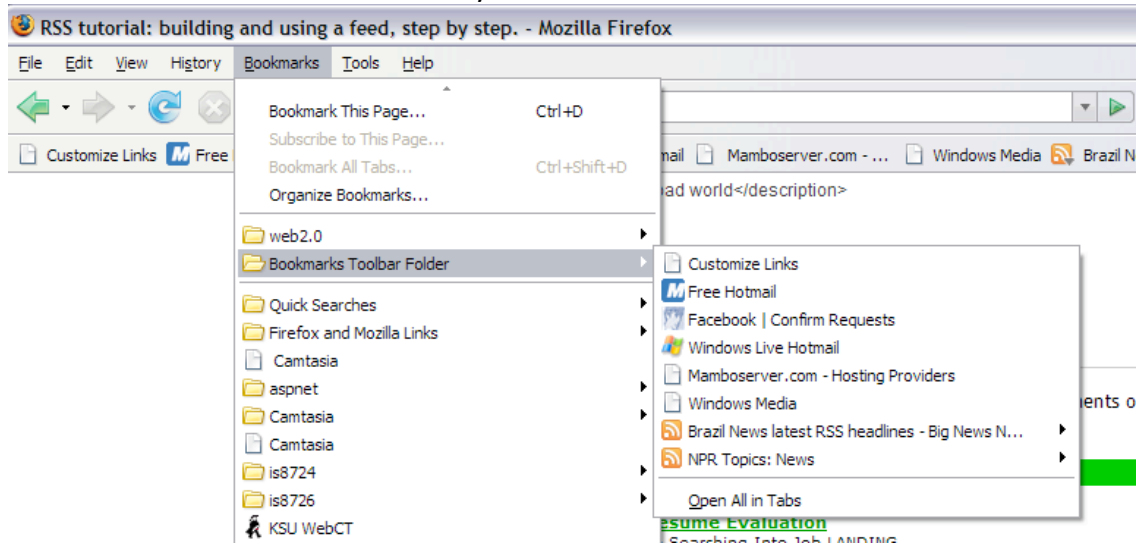


- You will be asked to confirm your choice  
(notice they are also referred to as Live Bookmarks)



By default, RSS subscriptions are stored in the 'Bookmarks Toolbar Folder

- To retrieve your RSS Feed headlines, simply go to:
  - Bookmarks → Bookmarks Toolbar Folder
  - The headlines will appear in a dropdown menu
  - Click on the headline you want



## Blogs

- Short for web logging
  - A weblog is a journal that is frequently updated and intended for general public consumption
  - Blogs generally represent the personality of the author or the Web site
- Directory of Blogs
  - <http://www.globeofblogs.com/>
  - <http://blogsearch.google.com>
- Reference site for setting up your own blog
  - <http://www.blogger.com>

## Wikis

- Wikis are web sites that allow users to freely access, contribute to and edit Web page content
- Wikipedia is the most widely known
  - Anyone can 'edit' the content
  - Reported accuracy is high above 80%
- [http://en.wikibooks.org/wiki/Main\\_Page](http://en.wikibooks.org/wiki/Main_Page) is a site for creating and contributing to educational textbooks – all content is free
- Creating a Wiki
  - Need a computer web server to maintain the wiki site

- Not standardized at KSU yet – hopefully will come out of ITS
  - Same decision point as RSS feeds
- Many programs are available some free, some not

## More on Emerging Technologies

- ***The Horizon Report*** describes six areas of emerging technology that will have significant impact on higher education within three adoption horizons over the next one to five years: <http://www.educause.edu/ir/library/pdf/CSD5320.pdf>.