

New & Upcoming Technology

What We Can Expect in 2011-2012

Computer Processors

- Most computers now sold integrate a *quad-core* (i.e., 4-core) processor.
- We can expect to see *hexa-core* and *octa-core* processors in home PCs.
- Advantages?
 - More easily run multiple applications simultaneously.
 - More quickly run individual apps that exploit this feature.

Computer Memory

- If you purchase a computer today, it is likely to have 4GB (i.e., 4 gigabytes) of RAM (random access memory).
- Toward the end of the 2011-2012 cycle, expect to see RAM norms to reach 6GB or 8GB.
- The next year should see more computers that utilize SSDs (solid state drives). SSDs basically are large, high-speed flash drives that can replace spinning hard drives.
- My prediction is that early systems may include both a smaller SSD for system software, and a higher-capacity hard drive for data.

Mice & Keyboards

- Consider using a wireless keyboard and mouse.
 - This technology has improved significantly over the past year or two. Wireless mouse and keyboard battery life now is about 12 months.
- An interesting mouse and keyboard sharing app is Microsoft's *Mouse Without Borders*.
 - Works with up to four networked computers.
 - Share a single mouse and keyboard among the computers; control a specific computer by moving the mouse cursor to the display of that machine.
 - Use a single mouse to drag & drop files, and copy & paste content between the computers.
 - Video & description: <http://tinyurl.com/6ag9tfm>
 - Download: <http://aka.ms/MouseWithOutBorders>

Computer Monitors & TVs

- The distinction between computer monitors and TVs will continue to narrow.
- Expect to see touch-screen monitors as PC makers attempt to compete with tablet computer makers.
- 3D TV? Not so much. The popularity of both 3D TV and 3D movies has fallen significantly, and continues to trend downward.
- One exception will be in the area of video game applications.
- Monitors/TVs will continue to become thinner and lighter.
- 2011-2012 probably will not be the year of ultra-thin and flexible OLED monitors/TVs.
- Internet TVs are available now; they integrate Web access into the TV experience.
- These TVs incorporate features already available through AppleTV, GoogleTV, Xbox 360, PS3, and Roku.

Computer Operating Systems

- Later this year, Microsoft will release to beta testers its Windows 8 operating system.
 - One can choose between a 'Traditional' interface and one that resembles the Windows phone 7 interface.
- Rumors indicate that Apple might adapt the iOS operating system (the one used on iPhone, iPod, and iPad) to the Macintosh.
- Or, they could simply change the look-and-feel of the Mac operating system to match that of iOS.
- Or not.

Web Browsers

- Firefox 4 was released in March, 2011. Firefox 5 was released three months later ... and Firefox 6 two months after that. Firefox 7 is in beta.
- Microsoft has released a 'test drive' version of its upcoming Internet Explorer 10 browser.

Apple iOS Mobile Devices

- Apple refrains from releasing info about future products. So most things you hear about upcoming apple products are rumor.
- Rumors abound that the iPhone 5 will be released this fall. Features?
 - Faster processor.
 - Thinner, with rounded back.
 - Edge-to-edge (larger) display.
 - Better battery life and camera.
- Advantages to purchasing iPhone 5:
 - The newest, neatest technology.
 - Probably the same price point as the iPhone 4, today.
- Disadvantages to purchasing iPhone 5:
 - Not a significant upgrade (based on rumored features).
 - The price of iPhone 4 probably will drop upon the release of iPhone 5.
- The iPhone 5 almost certainly will be available through:
 - AT&T
 - Verizon
 - Sprint
- Advantages to purchasing iPad 2 (vs iPad 1):
 - Thinner and lighter; more powerful processor.
 - Includes front/back camera and gyroscope.
 - iPad 3 probably will more expensive (due to a lighter, thinner, better battery).
- Disadvantages to purchasing iPad 2:
 - Rumor is that iPad 3 will be out in 1st half of 2012.
 - iPad 1 and 2 have the same screen resolution.
- The iOS 5 operating system is coming soon.
 - Easier to operate camera: it uses shutter buttons and can be used from the lock screen.
 - Less obtrusive notifications: they will not pop up in the middle of the screen, forcing you to dismiss.
 - No connection to a Mac/PC required to activate or update software.
 - iOS-to-iOS messaging bypasses text messages, potentially saving money.

The Cloud

- 2011-2012 will be the year of the Cloud.
- 'The Cloud' means that content is stored remotely at some location on the Internet rather than on the local device.
- Examples:
 - Offsite backup (e.g., Mozy, Carbonite)
 - Netflix
 - Microsoft Office 365
- Apple is the '800-pound gorilla' in the Cloud game. It will initiate its iCloud service along with iOS5.
 - Apple hardware no longer will be shipped with discs; software will be available only from the Cloud.
 - Any iTunes purchase will be available without connecting to a Mac/PC.

eBook Readers

- Barnes & Noble released a new eReader – the *Nook Simple Touch* – in May. This reader has a touch-screen and simplified controls.
- Amazon probably will release a touch-screen Kindle soon.
- The iPad series serves as both as eReader and general Internet appliance.
- Based on newly-announced technology, B&N and Amazon may release color eReaders in 2011-2012.
- E-Ink technology also may find its way into other areas of our lives, such as for credit card displays.
- More eBook loaning services will appear in the next year.
 - Many public libraries (including Stillwater, I believe) support eBook loaning.
 - Commercial eBook loaning services, such as <http://BooksFree.com> and <http://BookSwim.com>, permit you to loan and borrow eBooks.
 - Amazon is considering a Netflix-like eBook loaning service.

Social Networks

- Some indicators say that Facebook may have peaked, and they now are looking at ways to sustain their user base. (Does anyone remember MySpace?)
 - In browser video chat with Skype recently was added.

- Google+ is a more recent social network, and it introduces some new features.
 - *Circles* lets you group your friends.
 - Up to 10 people can watch YouTube videos and video chat, simultaneously.
 - Upload photos/videos from your phone for sharing in Google+.

Audio/Video

- There will be a continued movement over the next year toward home A/V content stored in the cloud.
 - A/V content stored on a hard drive attached to the home network.
 - Home TVs and stereos that pull content from mobile devices such as smart-phones and tablet computers. (E.g., *AirPlay* in Apple iOS 5.)

Financial Transactions

- Smartphones have started to incorporate and soon will use NFC (Near-Field Communication) technology.
 - According to Wikipedia, *'NFC allows for simplified transactions, data exchange, and wireless connections between two devices in close proximity to each other, usually no more than a few centimeters.'*
- Examples of usage:
 - Purchase goods or services by tapping or waving the smartphone on a reader at the checkout counter, gas pump, etc.
 - Exchange 'e-business-cards' by pressing a smartphone button in the proximity of the smartphone of a colleague.
 - Share a photo, video, or audio file with someone by pressing a smartphone button near the other's smartphone.
 - Alert friends of your activities on social networks by swiping your smartphone past a NFC reader at specific restaurants, cinemas, etc. (E.g., 'Blayne is at Carmike Cinema 10 in Stillwater, OK'.)
- Biggest Concern: Security of transaction.
 - Encryption protocols probably will be the most reliable solution for this problem.
- My suggestion: Proceed with caution.