

Crispen's Guide to What's New and What's Next

Executive Summary

Television

On February 19, 2009, US over-the-air television broadcasts must switch to an all-digital signal. On or before that date, users and schools will need to connect their televisions to a digital converter, cable box, satellite dish, or IPTV. IPTV is a digital television signal provided by the telephone company.

If you purchase a new high definition television, make sure the television can support 1920 x 1080 pixel progressive signal [1080p] and comes with multiple High Definition Multimedia Interface [HDMI 1.3] connections that are High Bandwidth Content Protection [HDCP] compliant. For analog signals [such as component video], purchase relatively good quality cables, but don't break the bank. For digital signals [such as HDMI], buy the cheapest cables you can find [see monoprice.com].

Liquid Crystal Displays [LCD] should become the dominant display technology in the short run. Two new television technologies that are just around the corner and worth investigating are Organic Light Emitting Diode [OLED] and Surface-conduction Electron-emitter Display [OLED.] Both may be available soon and have similar or improved pricing and picture quality compared to current display technologies.

Recordable Media

Stay away from both HD DVD and Blu-Ray DVD for the foreseeable future. Neither standard is ready for human consumption and both use Advanced Access Content System [AACS] encryption that could prevent or downgrade playback on non-AACS-compliant devices.

Game Consoles

Seventh generation game consoles [Xbox 360 and Playstation 3] are available today for approximately US\$500. The Xbox 360 has an optional HD DVD player [~US\$180] and the Playstation 3 has a built-in Blu-Ray DVD player. Both game consoles support wireless controllers, online play, free and purchasable downloads, and output that can play on older NTSC television sets as well as newer HDTV sets.

Grand Theft Auto IV will be released on October 16, 2007, for both the Xbox 360 and the Playstation 3 and is expected to break all previous sales records.

Hardware

Solid-state memory [NAND] may soon replace mechanical hard drives, provided engineers can solve the problem of limited read/write cycles on current flash memory. Combined with new screen displays and power supplies, this new memory may revolutionize the portable electronics market.



A new wireless standard called “802.11n” is being finalized that promises to boost wireless speeds by up to 10 times. Beware of pre-802.11n devices currently available and instead wait for new, official devices to come out in late 2007 or early 2008.

Cell phone companies are working a new mobile technology called “4G” that promises 100 Mbit/s while moving and 1 Gbit/s while stationary, enough to support streaming video on demand and even mobile learning. 4G is expected to be released between 2010 and 2015.

Radio Frequency Identification [RFID] will continue to be used in more products and commodities, possibly replacing bar codes in the next 10 to 20 years. However, security and privacy concerns about RFID still need to be addressed.

Light Emitting Diodes [LEDs] use up to 1/30th the power of incandescent bulbs and have a 10 year lifespan. Because of this, expect LEDs to replace incandescent light bulbs for home and school lighting in the next 20 years.

Utilization

Distributing computing networks, utilizing millions of idle computers around the world, will be used to create computational models of the human senses, climate, etc.

Web accessibility and usability will continue to gain importance in the short term. Both the Section 508 and Web Content Accessibility Guidelines will be rewritten in 2007 to accommodate new goals and needs.

Internet Protocol version 6 [IPv6] will replace the current IPv4 within 10 years, creating enough unique internet addresses for every atom of every person in the world.

