Entertaining Intelligence

by Logan Kugler

Thirty years ago, when shopping for a TV in your local consumer-electronics store, you had two options: black and white or color. Today you're faced with a pile of decisions. And it's not just TVs that have become complicated—the same is true for virtually every home entertainment component. Here's a quick look at some of the language you should know before dropping several thousand simoleons on a new home theater system.

Resolutions

480i (SDTV) & 480p (EDTV)

The i in 480i stands for *interlaced*, which means the video image is drawn in alternating horizontal scan lines—the first pass draws all the odd-numbered lines, and the second, all the even-numbered lines. *Progressive* video, indicated by the p, draws a whole image in one pass, resulting in less image flicker. The number before the letter describes the total number of horizontal lines; 480i has been the standard resolution for over 20 years, and it's what you're watching on a good ol' fashioned boob tube.

720p (HDTV)

As explained above, the p stands for progressive and 720 indicates the number of horizontal lines in the image. The more horizontal lines you have, the sharper the picture; 720p is considered the starting range of high-definition TV.

1080i & 1080p

1080i is widely regarded as a true high-def resolution. However, it's not that much better than 720p because 1080i is interlaced, not progressive like 720p. But if you have a 1080p HDTV in your bedroom, consider yourself fortunate, as it provides the clearest picture available in any television thus far.

Connections

COAXIAL

If you have cable TV in your home, chances are you've seen a coaxial cable—it's the cable that all modern cable companies use to transfer a television signal from the broadcasting station to the TVs inside your house.

COMPONENT

A type of analog video information that is transmitted or stored as three separate signals, versus composite's one (see next entry), resulting in high-quality video images.

COMPOSITE

A type of analog video information that is transmitted over a single signal. Because of the restrictions of using just one signal to transmit video, the highest resolution a composite cable can transmit is 480i.

DVI

Digital Visual Interface is a technology designed to maximize the visual quality of a digital display device such as an LCD display. DVI works by transmitting the desired brightness of each pixel as digital data; the display reads each number and applies that brightness to the appropriate pixel.

HDMI

High-Definition Multimedia Interface is a widely industry-supported, uncompressed digital audio-video interface. Its most impressive feature is the fact that it can transfer both audio and video over its single-cable design. Even better, it does it all in HD.

OPTICAL

Similar to HDMI in the sense that it's industry supported and uncompressed, an optical audio connection transfers digital sound in up to 7.1 channels to an audio receiver or television, all in a single cable, and delivers the best sound possible for today's audio electronics.

S-VIDEO

A type of analog video information that is transmitted or stored as two separate signals, unlike composite video, which carries the entire set of signals in one package—and the more signals you have, the better the picture is going to be.

Displays

CRT

Cathode ray tubes were used in all television sets until late last century and the advent of plasma screens, LCD TVs, DLP (see next entry), and other technologies. As a result of CRT

technology, television (even non-CRT sets) continues to be referred to as "the tube" well into the 21st century.

DLP
Digital Light Processing is used in projectors and projection TVs. The brainchild of Texas Instruments, this technology is based on an optical semiconductor that allows light to be modulated digitally via millions of tiny movable mirrors on silicon chips.

LCD
A liquid crystal display is a thin, flat-panel device that can produce picture quality equal or superior to a plasma display (see below), but without some of a plasma TV's pitfalls. An LCD TV consumes very small amounts of power, typically lasts longer, and is thinner than a plasma TV, but costs more per square inch.

OLED
An emerging technology, organic light-emitting diode displays require no backlight to function and, as a result, can run off power supplies as feeble as AA batteries.

PLASMA
A plasma display is widely favored by many because of the quality and size you can get for less money than you'd pay for any other large flat-panel display technology.

PROJECTION
Similar to CRTs in impending obsolescence, projection TVs are increasingly hard to find due to the fact that the newer DLP TVs outperform standard projection TVs while maintaining the same projection-based technology.

SED
Still in prototype form as of May 2006, Surface-conduction Electron-emitter Displays combine the slim form factor of LCDs with the high contrast ratios, refresh rates, and picture quality of CRTs.

SXRD
Used in home theater projectors, Sony's Silicon X-tal Reflective Display technology provides crisp 1080i HD resolutions for those looking for a picture that's bigger than any TV on the market today. X-tal, by the way, is Sony-speak for crystal.

Discs

BLU-RAY
One competitor for the next generation of optical media. Blu-ray, backed by Sony, is a an optical format designed for storage of high-definition video and sound. Unlike its predecessor, DVD, Blu-ray can store up to 50GB per disc and has a lot of Hollywood studio support resting atop its wide shoulders.

DVD
Originally, DVD stood for digital video disc, then digital versatile disc. Now its proponents claim it's not an acronym at all—DVD simply stands for, well, DVD. This optical media can be used for data storage and is best known for storing movies with video and sound quality that are higher than that of VHS.

HD-DVD
HD-DVD, Blu-ray's main competitor, is another successor to DVD that's designed for storage of high-definition video and sound. HD-DVD discs can store up to 30GB.

TVs

EDTV
Enhanced-definition television is not as clear as HDTV, yet provides quality that's better than that of SDTV. EDTV resolutions include 480p and 576p.

HDTV
High-definition television has a higher resolution than traditional formats (NTSC and PAL) allow. HDTV is broadcast digitally and can support multiple resolutions (480, 720, and 1080).

NTSC
The analog television system in use in Korea, Japan, Canada, and the United States.

PAL
An acronym for phase-alternating line, PAL is the system used for broadcast television in Europe, Asia, Africa, and Australia.

SDTV
Standard-definition television refers to television systems that can only televise resolutions that are lower than 720p (HDTV). This includes 480i, 288p, and 240p.

Audio

DOLBY DIGITAL (EX)
This audio compression technology, developed by Dolby Laboratories, started the whole surround-sound phenomenon. Dolby Digital EX is an extension of the standard Dolby Digital sound compression and is used for audio receivers supporting 6.1 or 7.1 channels.

DTS (ES)
Digital Theatre System Extended Surround, a multichannel surround-sound format used for both commercial and consumer applications, is typically a feature on audio receivers that support 6.1 or more channels.

THX
The trade name of a high-fidelity sound reproduction system seen in movie theaters, screening rooms, home theaters, computer speakers, gaming consoles, and car audio systems.

Logan Kugler has a home entertainment system that does all of the above and more. It even makes him breakfast in the morning and does his laundry. Actually, that's a lie.