



The Digital TV Connection

Pandora's Box or pot of gold?

The interconnectivity of digital components is one of the most challenging aspects of the DTV transition, but also one of the areas of significant business opportunity. As manufacturers and retailers of accessories, it is a business imperative to educate consumers about the true benefits of HDTV and how to connect up all their components for the highest performance. Once people begin to better understand the capabilities of HD, they'll understand the need for quality accessories that go with them.

For the most part, consumers remain uninformed about the technology behind HDTV and most still don't know about the February 2009 analog TV cutoff date. In fact, most consumers are buying TVs because of lifestyle considerations.

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They love the flat look and the ability to hang it on a wall. Most don't know you need a high-definition source to feed their new HDTV, that they need specific types of cables to hook them up, and that those cables don't come with most TVs. There are not only various forms of HD—including 720p, 1080i, to 1080p—but also color depth that scales beyond 8-bit, higher refresh rates and greater pixel density. It's enough to make the average consumer's head spin. So is all of this a Pandora's box or a pot of gold at the end of the rainbow? Changes in technology are historically painful. As responsible retailers, installers, and manufacturers, we need to help ease the transition by educating consumers. These should be our lessons:

1. Analog TVs without satellite or cable service will go dark on February 17, 2009. In order to continue receiving broadcast programming, consumers will need to purchase a converter box or a new digital television.

2. HDTVs come in many flavors of technology, such as 1080i and 1080P. The additional technology costs significantly more money, but it's worth it.

3. HDTVs and sources need special HD cables, namely HDMI or component video with high quality audio cables.

4. HDMI cables also come in many flavors of technology. From the original HDMI 1.0 to the current HDMI 1.3. Not all HDMI cables are the same.

5. HDMI 1.3 has two specifications: Category 1 and Category 2. To future proof their cable purchase, consumers should buy HDMI Category 2.

6. HD sources also need special HD cables (like HDMI) and they typically don't come with the components.

7. The bigger the display, the better quality the HD components and cables need to be. Artifacts are more easily seen on big displays.

8. The technology of HDTVs and HD sources are likely to upgrade significantly in the next two years; the HDMI cable consumers buy today may not work well with tomorrow's technology. Consumers should know that to avoid obsolete cables, they should purchase those that meet HDMI 1.3 category 2 specifications or better.

9. The longer the cable run, the better quality the cables need to be. HDMI is sensitive to length, and only the highest quality cables will be able to transfer high-speed, higher-definition signals longer than 25 feet.

10. Through HDMI, consumers now have access to the highest quality audio ever, with movies for the first time in SACD and DVD Audio and lossless formats. This creates opportunity for high quality audio and sound to go along with high-quality video.

11. High-speed, high-definition cables are extremely sensitive to cable integrity so the construction and durability of the cable and connector are essential.

The High Margins Add-ons

- Installation Services
- Extended Warranties
- Accessories
- Audio
- Furniture
- Content

Source: CEA

12. There are compatibility problems between certain HDMI components. Retailers can resolve those issues by pre-testing the system.

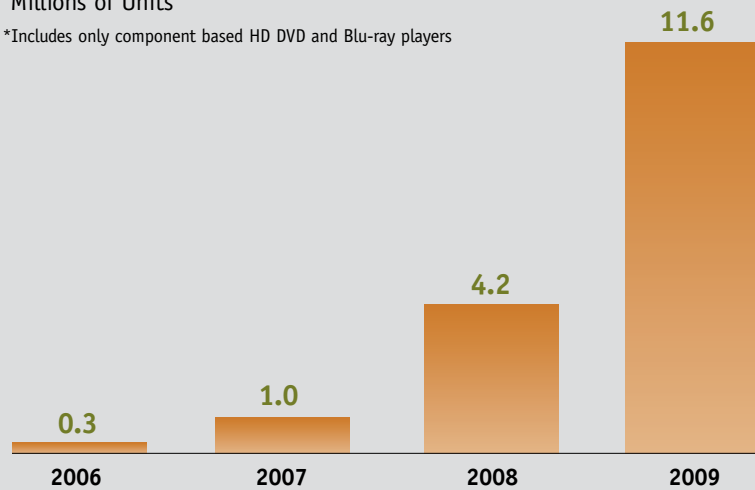
Expect higher-quality, high-definition content and source products in the future. Around the corner are 90hz and 120hz refresh rates, up from today's 60hz. The result for the consumer is a smoother flow of motion, especially with high-defi-

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Source: CEA Sales and Forecasts, 12/06

tion gaming. The increased data transfer rate and the cable requirements will double.

Also expect greater color reproduction, better known as “deep color,” steadily increasing from 8-bit to 12-bit to 16-bit color, doubling the data rate and giving the consumer better contrast and more accurate color. We are still a ways from approaching the true equivalent of film, but we are moving there step by step.

There’s no end to the consumer’s desire to have a bigger picture. The video wall seen by millions in the Arnold Schwarzenegger film “Total Recall” may soon be a reality. We’ll have bigger displays with more pixels, so that 1080p will soon be 1440p and greater. The consumer benefit is a finer-grain picture, especially visible on bigger TV monitors.

Meanwhile, we have the PC continuing its march toward the center of the home, driving multimedia convergence at even higher data rates. Today the PC is already capable of higher resolution than consumer grade HDTV, and will surely carry the quality and technology of high definition even further.

The HDTV transition is also creating terrific opportunities to sell other high-end accessories. Media extenders, for one, have the capability of displaying video throughout the house. Consumers will be using media center PCs to archive more and more of their content, but few will want to view that content on their monitors. With an extender they can watch their downloaded movies or slide shows wherever they’re most comfortable. HDMI switchers allow installers to connect high-defini-

tion signal sources to displays throughout the home.

Power conditioning is another category that benefits both the dealer and the consumer. Installers should include a surge protector on every display to guarantee consistently great sonic performance and picture resolution. Equally important, surge protectors help consumers protect the investment they make in their systems against power surges and spikes from storms and violent weather disturbances.

Home automation gives consumers one-touch access to their home theater systems, lighting and drapes. They can instantly set the mood and ambience of the room from anywhere in the house. They can consolidate the functions of their satellite, DVD, audio system and TV remotes into one easy-to-use and easy-to-locate control.

What we’re seeing now is like the building of the interstate highway system. The roads came first and then the traffic followed. Bandwidth is our highway and consumers will create the traffic. All of the above creates learning opportunities for the

consumer and gives retailers the opportunity to differentiate themselves with a knowledgeable sales staff and superior customer service.

The future for high-tech accessories is bright. Technology and innovation will keep building the need for higher performance. Higher performance keeps prices up and creates opportunities for our industry.

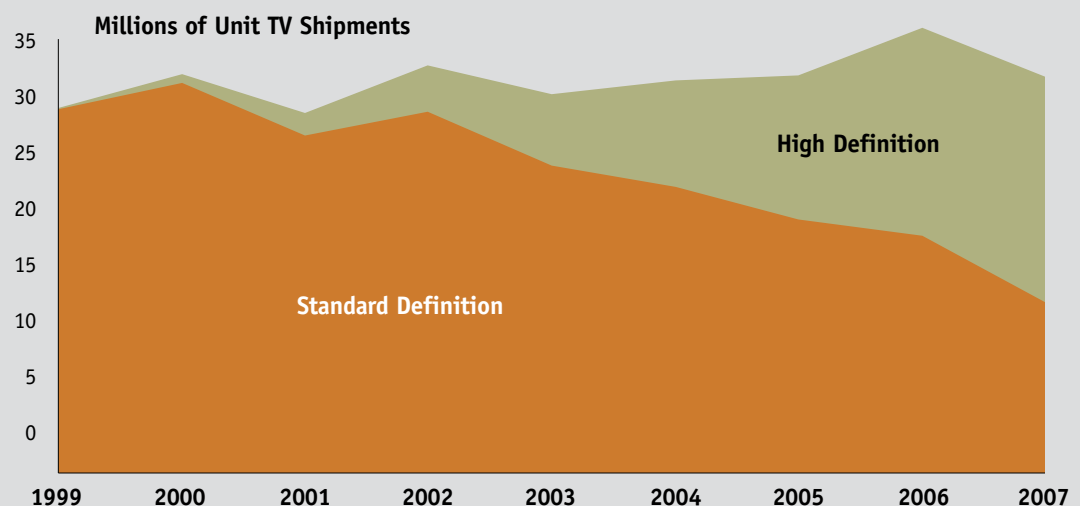
Through the consumer education efforts of our company and yours, more people will learn

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about the benefits they can get from their HDTV purchase. They become product evangelists for our industry. Most important, consumers get what they really want: a better home theater experience.

Noel Lee is Head Monster of Brisbane, Calif.-based Monster Cable.

The Shift to HDTV



Source: CEA Shipment Data Reports