

# Disc wars

After 10 years of peace, electronics manufacturers are ready to go to war again for the home entertainment dollar.

In the early days of videotape, VHS and Beta tangled for market dominance. Since the advent of DVD almost a decade ago, things have been relatively peaceful. That changes today, as Samsung's high-definition Blu-ray player joins Toshiba's two HD DVD machines, which debuted in April, on store shelves.

Blu-ray discs can't be played on HD DVD players and vice versa, complicating things for consumers who can afford the pricey units to play movies on those spiffy new high-definition televisions. (Both camps say their machines will play regular DVDs.)

Here we try to navigate the battlefield that is high-definition disc.



## Capacity



While initially Blu-ray enjoyed the advantage, the gap has narrowed, said Jodi Sally, vice president of marketing for the digital audio and video group at Toshiba America. Sally touts HD DVD's 45-gig capacity and flexibility and calls the system more evolutionary than revolutionary. "We're not going to reinvent the format. It's the best-selling electronics product of all time. We're just transitioning it to high definition. We just feel it's easier and simpler for consumers to understand."

HD DVD's triple-layer 45-gig disc seemed to make this point moot, but according to the Blu-ray Disc Association, its discs can easily be expanded when manufactured by adding layers. Said Frank DeMartin, vice president of marketing for Mitsubishi Digital Electronics America, "It provides the ability to provide interactivity when connected to a network, and that's got a future. You can't be too rich or thin, and you can't have too much storage capacity or processing power or bandwidth."

## Interactivity

HD DVD is a movie and gaming medium, with the support of companies like Microsoft for hardware and software, Sally said. Reports surfaced recently that Microsoft intends to add HD DVD to its popular Xbox game system as early as this year. Blu-ray will have Sony's PlayStation 3 as its gaming platform, but that doesn't bother Sally: "Keep in mind that in the gaming industry, there have been different formats that have succeeded."

Here's where things get interesting. Because Sony is a leading proponent of Blu-ray, the upcoming PlayStation 3 will have a Blu-ray drive. PlayStation is the leading game system in the world, and with games becoming more intricate, more space should be a positive. Think of buying a movie on Blu-ray and having the game to go with it on the same disc. "If it weren't for PS3, I'd say it was a long slog between the two formats," DeMartin said.

## Security

So far HD DVD has committed only to the Advanced Access Content System (AACS), which will control the number of copies that can be made from discs and stored on a home entertainment server (a hard drive containing all the movies, music and recorded TV shows in your collection).

Blu-ray will use AACS, plus a watermark that will allow only legitimately manufactured discs to operate in its players, and a renewable encryption technique called BD+ that will render a player inoperable if it's hacked. Once a software update is available, the player can download it and playability is restored. Some experts have said this is going too far.

## Pricing

HD DVD enjoys a distinct advantage. It debuted about two months ago with two models from Toshiba at about \$800 and \$500, reasonable given that the first DVD players a decade ago had the cheapest models starting at \$800. But is it unrealistic to expect consumers to shell out for this, considering they need a high-def TV to use a player? "I think you have to look at the prices of the TVs themselves," Sally said. "Now a \$500 DVD player as a part of the percentage of that package isn't too much."

Three Blu-ray players were to debut last week, but only the Samsung BDP-1000 made it to stores today (even that release was several days late), with a \$1,000 price tag. DeMartin said that shouldn't be a long-term issue. "The wild card will be the PS3. I think if you're looking at a price point of \$499 or \$599 for it, I think it's going to change the dynamics a little bit. It will drive component costs down faster." Sony and Pioneer have delayed the releases of their machines until later this summer.

## Hardware support

Toshiba, Sanyo and NEC are on board. Given the number of manufacturers, that roster may not seem very deep. Sally said Toshiba is confident, however. "HD DVD is a proven format. It's very similar to the DVD format. The manufacturing of the disc is very similar and it's easier (and cheaper) for manufacturers to produce."

The big boys – Sony, Pioneer, Mitsubishi, Samsung, Panasonic, Phillips and Sharp – are all firmly in the Blu-ray camp. A host of computer companies have also signed on. But some companies are being conservative in their approach. "Although we have a lot of patents in Blu-ray, we thought 2006 seemed like a very uncertain year," DeMartin said.

## Software support

In addition to Microsoft, these movie studios have committed to HD DVD: Paramount, Universal, Warner, New Line and HBO. Releases from Warner and Universal have trickled out since the machines debuted.

Blu-ray has a more extensive lineup of studios that plan to release titles on the format: Paramount, Sony, 20th Century Fox, Lionsgate, Warner and crown jewel Walt Disney, which includes the Disney library and four other labels, Touchstone, Miramax, Hollywood and Dimension. And Blu-ray enjoys the backing of gaming companies Electronic Arts and Vivendi Universal.