

## Sony's Blu-Ray Victory: Learning to Catch the Technology Wave?

Published: March 12, 2008 in Knowledge@Emory

Technology development may be the highest-risk story in business. Get it right and you're Apple. Get it not quite right and you're Atari. Scholars at Emory University's [Goizueta Business School \(http://www.goizueta.emory.edu/\)](http://www.goizueta.emory.edu/) say that Sony's recent victory in getting the entertainment world to adopt its Blu-Ray video disk standard may provide some important clues to successfully navigating the technology wave.



### Toshiba vs. Sony

Over the past few years, two competing groups sought to give the public a more advanced video disk technology, a next-generation standard that would squeeze up to five times more information onto a disk than the current DVDs. The two consortia, alike in power and dignity, as Shakespeare would say, were led by Toshiba and Sony. Toshiba championed HD (High Definition) DVD, and Sony, Blu-Ray.

For Sony, it looked like a replay of its 1980s fight to make its Betamax videos the industry standard – but with a different ending. In the Betamax/VHS case, for instance, professionals on the whole reportedly preferred Sony's Betamax, but the backers of VHS outmaneuvered Sony.

This time around, Sony didn't have a technological advantage, professors say. "The technical differences between Blu-Ray and Toshiba HD DVD are sort of moot. They're both technically pretty good. They both have their pros and cons," says [Ramnath Chellappa \(http://www.goizueta.emory.edu/Faculty/RamnathChellappa/index.html\)](http://www.goizueta.emory.edu/Faculty/RamnathChellappa/index.html), an associate professor of information systems and operations management at Goizueta Business School.

In this case, what won the battle for Sony was a question of business savvy rather than technology. "It's really a business victory rather than a technical victory," Chellappa says.

In consumer electronics, Chellappa explains, what matters are what economists call network externalities. A network externality is something outside the actual device that adds value to that device. For example, one fax machine isn't worth much, but two are worth twice as much, and millions may be worth much more still. In the case of a video or music standard, according to Chellappa, it's a question of a two-sided externality: the developers on one side, the consumers on the other.

What made the difference for Sony was that it finally convinced the movie studios and major retailers such as Wal-Mart to support Blu-Ray.

But why did Wal-Mart and the studios choose Sony? [Anandhi Bharadwaj \(http://www.goizueta.emory.edu/Faculty/AnandhiBharadwaj/index.html\)](http://www.goizueta.emory.edu/Faculty/AnandhiBharadwaj/index.html), an associate professor of information systems and operations management at Goizueta, argues that it was because of Sony's PlayStation 3 gaming console. Every one of the hot-selling video game players—more than 3.2 million units in the U.S. alone to date, according to Gizmodo, a video game review—is equipped with Blu-Ray playing abilities.

Bharadwaj says that by building Blu-Ray disk playing capability into every PlayStation 3 since the platform was launched in 2006, Sony effectively gave itself a huge edge in distribution that Toshiba was going to be unable to outmaneuver. "I think Toshiba probably should have seen the writing on the wall even back then," she says.

But other professors think Sony may have been more lucky than smart this time around. "My view is that they got lucky," says [Jagdish Sheth](#)

(<http://www.goizueta.emory.edu/Faculty/JagdishSheth/index.html>), a professor of marketing at Goizueta and a corporate strategist. "I don't think they've learned anything."

Sony, he says, is very much like Phillips, the Dutch entertainment conglomerate. "They know how to invent but they don't know how to market," he says. Like Phillips (whose innovations included the compact disk player), Sony has historically tried to control the technology too much, Sheth says, when they might have won more often had they licensed their designs and contented themselves with a smaller size of what might have been a much larger market.

A licensing strategy can work well for a technology-intensive company that has difficulty breaking into retail channels. It's why IBM, for instance, is still able to make money on the PC business even though its PC business now belongs to Lenovo: every non-Mac machine is still based on an IBM design and IBM gets a royalty payment, notes Sheth. It's also the advice Sheth says he gave Hughes' DirectTV subsidiary when it decided to license its home satellite TV dish technology to Thomson Electronics and Matsushita.

Historically, however, if Sony ends up on the wrong side of history in pursuing Blu-Ray rather than a direct download system, it will be in good company. Some technology theorists, most notably Clayton Christensen of MIT, have claimed that the companies that led a previous wave have seldom been able to translate that success into the next generation of technology. Outside of IBM, for example, the early developers of computers did not succeed in staying powerhouses in the next generation – and even IBM failed to see the shift away from hardware towards software, famously outsourcing the insignificant job of creating an operating system for its PCs to a little startup called Microsoft.

And then there's the story of a little Japanese company called Sony that went to Bell Labs in the mid-50s and walked out with a license for a technology for something called a transistor – a device that made it possible for the first time to manufacture cheap, tiny, portable radios.

### **Innovation blindness?**

Why do so many companies often fail to make these shifts, sometimes even when they seem fairly simple—such as Scrabble co-owners Hasbro and Mattel's inability to cash in on the online Scrabble boom—although an Indian knock-off called Scrabulous has over 700,000 players a day?

One explanation, popularized by MIT's Christensen and detailed in his 1997 book on the subject, *The Innovator's Dilemma*, is that entrenched players, weighed down by their old thinking, aren't able to adapt to a new world that doesn't revolve around their technology. These companies tend to be overtaken by new players who are working on a new technology that starts out inferior and then develops into a threat too rapidly for the older company to respond.

Yet it may be too simple for companies to back new technologies over old. [Ashish Sood](http://www.goizueta.emory.edu/Faculty/AshishSood/index.html) (<http://www.goizueta.emory.edu/Faculty/AshishSood/index.html>), an assistant professor of marketing at Goizueta, argues that Christensen's theory grossly exaggerates the rate of disruption by entrants using new technologies that attack from below. In practice, he says, it's often hard to predict disruptive potential of a new technology based on relative technological performance alone. He cites a study of the development of more than 30 technologies in a wide range of industries, which showed that technologies improve in a sporadic manner with many periods of no improvement followed by spurts of big improvements.

Sood does contend that companies can rebound from a technology miss to come back and prevail. "It has happened often in the past, such as in the video games industry, that companies which lose in one generation of the technology in the war of standards have come back and won in the next generation," he says. "Even in the data storage industry, optical storage and magnetic storage technologies have both had years of technological superiority over each other."

However, it remains to be seen whether the current victory of Blu-ray DVD will translate into the bigger

victory of dominant consumer demand over alternative technologies like the digital downloads or holographic storage.

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