than most existing electric scooters on the market. What strategies might your company pursue to try to increase your company's success?

5. Reread the Strategy in Action 7.1 on Microsoft's "segment zero" threat. Do you think one operating system for smartphones or tablets will become dominant? If so, which one and why?

CLOSING CASE

Blu-ray versus HD-DVD and Streaming: Standards Battles in Video

In 2003, Sony officially launched its Blu-ray disc, an optical disc data-storage format that could offer high-definition video, with hopes of replacing the DVD format. Sony's technology had the backing of a consortium that included Philips, Panasonic, Pioneer, Sharp, Samsung, Hitachi, and others. Toshiba, on the other hand, was not eager to let Sony dominate the market with its Blu-ray technology; Sony and Philips had controlled the original standard for compact discs (CDs), and every producer of CDs, CD players, and CD recorders had been required to pay licensing fees to Sony and Philips–an extremely lucrative arrangement for the partners. Toshiba thus formed a consortium, the DVD Forum, which developed a competing, high-definition DVD standard, HD-DVD, making it the "official" successor to the DVD format.

Both new formats were intended to deliver a theaterlike experience at home, with brilliantly clear video and surround-sound audio, on high-end LCD and plasma televisions. The formats, however, would be incompatible. Consumers, retailers, and movie producers all groaned at the prospect of a format war similar to the battle that had taken place between Sony's Betamax and JVC's VHS video standard three decades earlier. That war had left many bloodied—consumers who bought Betamax players, for example, found that very few movies were ultimately made available in the format, and retailers got stuck with unwanted inventory in Betamax players and movies. The threat of another format war caused many retailers and consumers to delay their purchases of the next-generation players while they waited to see if the market would pick a winner. Fearing a lengthy, costly battle, consumer electronics producers began working on players that would be compatible with both standards, even though that would significantly increase their cost.

Initially, the HD-DVD standard had a head start. Blu-ray players were considered to be too expensive and buggy, and there were few movie titles available in the standard. Toshiba, on the other hand, already had the cooperation of several major Hollywood studios for its format, including Time Warner's Warner Brothers, Viacom's Paramount Pictures and Dreamworks Animation, and NBC Universal's Universal Pictures. Sony had only its own Sony Pictures Entertainment, Disney, News Corporation's 20th Century Fox, and Lions Gate Entertainment.

Both companies also used videogame consoles to promote their standards. Sony incorporated the Blu-ray format into its PlayStation 3, dramatically raising the cost of the devices. Though it sold the consoles at a very low price relative to cost, the consoles were still significantly more expensive than traditional videogame consoles, causing PlayStation 3 to sell only about half as many total units as PlayStation 2 had sold (85.23 million versus 157.68 million, respectively). Sony was willing, however, to concede some ground in the PlayStation battle to win the Blu-ray war. Toshiba's HD-DVD was offered as an optional, add-on drive for Microsoft's Xbox 360.

However, on the eve of the Consumer Electronics Show in Las Vegas in early January 2008, Warner Brothers announced that it would no longer support the HD-DVD standard. This set off a chain reaction among content providers and retailers. By late February, New Line Cinema, Universal Studios, and Paramount announced that they would be releasing movies on the Blu-ray format, and Best Buy, Wal-Mart, Circuit City, Future Shop, Blockbuster, and Netflix all announced that they would exclusively stock Blu-ray DVDs. The blow was unexpected—and devastating—for Toshiba. On February 19, 2008, Toshiba's CEO, Atsutoshi Nishida, conceded defeat by publicly announcing that Toshiba would no longer produce HD-DVD players, recorders, or components. By late 2009, Toshiba had released its own Blu-ray disc player.

Sony's Blu-ray victory, however, was not the landslide that it expected. On September 12, 2008, a consortium of tech heavyweights (including Intel and Hewlett-Packard) announced that they would collaborate with Hollywood to create standards that would make downloading movies fast and easy. If consumers were able to download high-quality movies off the Internet, it would become increasingly difficult to persuade them to spend $300 or more on a Blu-ray player. Carmi Levi, senior vice president at consulting firm AR Communications, predicted that "Blu-ray is probably going to be the last physical [product] where you walk into a store, get a movie in a box, and bring it home."

By 2012, about one-third of U.S. households had a device that could play a Blu-ray movie (including PlayStation 3); at the same point in the DVD format's life, over half of U.S. households had a device for playing DVDs. Video streaming revenues had reached $5.7 billion in the United States by 2014 and were expected to reach $14 billion by 2018. Physical DVD and Blu-ray sales, on the other hand, were expected to drop from $12.2 billion in 2013 to $8.7 billion by 2018. Though the availability of Blu-ray format streamed content was increasing, many people preferred to stream content in standard (versus high definition) format because it was faster, reducing the buffering time necessary for watching content. In fact, one study found that nearly one-quarter of U.S. households did not have adequate bandwidth to stream high-definition content, and another study found that even in households that could stream high-definition content, many viewers still chose standard definition viewing. On May 1, 2014, Sony issued a warning to investors that it expected to take a hit on earnings because Blu-ray sales were contracting faster than it had expected.

Sources: Anonymous, "Battle of the Blue Lasers," *The Economist*, December 2, 2004, p. 16; B. Schlender, "The Trouble with Sony," *Fortune*, February 22, 2007, p. 46; C. Edwards, "R.I.P., HD DVD," *BusinessWeek Online*, February 20, 2008; K. Hall, "DVD Format Wars: Toshiba Surrenders," *BusinessWeek Online*, February 20, 2008; C. Edwards, "Blu-ray: Playing for a Limited Engagement?," *BusinessWeek Online*, September 18, 2008; M. Snider, "Blu-ray Caught in Shift to Streaming," *USA Today*, August 23, 2012, www.USAToday.com; Yahoo Finance; R. McCormick, "Video Streaming Services Could Make More Money than the U.S. Box Office by 2017," *The Verge*, June 4, 2014, www.theverge.com; M. Willens, "Home Entertainment 2014: US DVD Sales and Rentals Crater, DVD Subscriptions Soar," *International Business Times*, March 10, 2015; vgchartz.com, March 10, 2015; J. Rietveld and J. Lampel, "Nintendo: Fighting the Video Game Console Wars," in *The Strategy Process* (H. Mintzberg, Ed.) (5th ed.). FT Press, 2014; Mobile phone penetration around the world, 2005–2014. United Nations Telecommunications, ICT Report 2014.

CASE DISCUSSION QUESTIONS

1. What were Blu-Ray's advantages in the competition with HD-DVD? Could Toshiba have done anything differently to ensure the HD-DVD standard's success?
2. Why do you think Warner Brothers' announcement set off a chain reaction?
3. Could Sony have anticipated that streaming would dampen the revenues of Blu-Ray?