THE FUTURE OF THE DVD

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Executive Summary

Physical media is the most popular method of video consumption, with about 92 million U.S. households owning either a DVD player or a Blu-ray Disc player, according to the Entertainment Merchants Association (EMA). Americans have amassed collections of physical media; players are in about 80% of homes; DVDs/Blu-ray Discs are sold at nearly every mass retailer and are available to rent by mail, at brick-and-mortar stores and kiosks in nearly every community nationwide. This pervasiveness, familiarity and access fuel projections that physical media will be the dominant player through 2015 and potentially beyond.

During this time, digital distribution will gain market share; experts anticipate it will one day be the home video market share leader. However, the timeline in which the transition from emerging technology to preferred method of video consumption will occur is undetermined, with some analyses showing that it could take more than 10 years for digital penetration to reach the majority market share. Factors that will dictate the pace of this growth include cost, access to technology (e.g. broadband, equipment) and consumer behavior.

Studios' dependence on DVD sales and profits will also shape and likely extend physical media's reign as the dominant method of home video consumption. The Digital Entertainment Group (DEG) reports that in 2010, physical media accounted for $16.3 billion in retail sales, representing the lion's share of studio revenue. This number has dropped 27% in the past five years, but DVD sales remain the largest single revenue driver for studios.

In addition to generating billions in profits for the studios through consumer purchases, physical media is foundational to the billion-dollar home-rental industry, with Americans renting nearly 2.4 billion DVDs and Blu-ray Discs in 2010 (IHS Screen Digest). The low price point of rentals and the increased presence of retailers and ownership of DVD and Blu-ray Disc players have made physical media the go-to choice for home entertainment.

The portability and relatively inexpensive price point of the DVD help expand the lifespan of physical media, highlighted by Redbox's $1-a-night rentals and Netflix's unlimited DVD subscription plans that start at $9.99 per month. Additionally, purchases of Blu-ray Discs and players jumped 86% in 2010, giving further evidence that physical media as the primary home video medium will take substantially longer to fade out than the demise of VHS a decade ago (Consumer Electronics Association [CEA], DEG).

Also unlike the transition from VHS to DVD, consumers don't have to choose a single consumption method or toggle between players. Physical and digital media can easily be played on a single TV and/or enabled through the same Blu-ray device. Physical and digital media in many cases are complementary, helping to expand the lifespan and viability of physical media dominance for years to come.

Introduction

The future of physical media as the primary method of home video distribution is not simply a matter of inertia or access to new technology. The evolution will be prodded and restrained by a multitude of factors, including: content preferences and access; industry influences; and technological advances. The following report assesses the influence of each on the transition from physical to digital and draws comparisons to similar evolutions. The current forces and projections reflect that digital will continue to grow share, but physical will maintain a meaningful share of the market for years to come.

Physical Media Pervasiveness

Hardware
As of 2010, about 92 million U.S. households have at least one DVD player, and two-thirds of those homes have multiple players, according to the EMA. The EMA also reports that nearly 14 million households have Blu-ray players, with unit sales increasing by more than 20% a year. Add the 46 million U.S. households with video game consoles – most of which can play discs – and it can be concluded that a large segment of the U.S. has committed to packaged media for their home video use.

Blu-ray Players
As the average Blu-ray player price tag has fallen to $121 in 2011 from $158 in 2009, Blu-ray player unit sales will jump to 13.2 million from 7.09 million, according to the CEA. During the same time period, U.S. DVD-player sales will fall to 19.2 million units from 21 million.

Determining when Blu-ray players will be used more for their connectivity than for their disc-playing remains an important question, as about 80% of Blu-ray players sold in the U.S. are network-enabled (**FIGURE 1**).

FIGURE 1
Source: Consumer Electronics Association
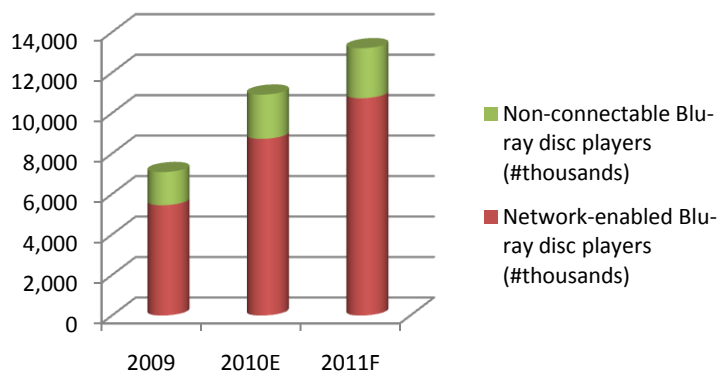
Televisions
While the recession has curtailed some spending on DVDs, the prospect of higher price tags for Internet-connectable devices appears to be keeping consumers from committing to network-enabled products and causing them to stay with tried-and-true components.

Americans are taking advantage of falling high-definition television prices and are maintaining TV-buying habits despite a still sluggish economy. As of March 2011, the CEA estimates that about 30 million high-definition TVs were purchased in each of the years 2009 and 2010, and the same number will be purchased in 2011. That's largely because the average price will fall to $609 in 2011 from $731 in 2009, according to the CEA (**APPENDIX A**).

Very few of these TVs will be web-enabled in the near future, indicating the continued need for DVDs. Just 11% of the approximately 90 million HDTVs purchased for the three years ending in 2011 will be Internet-connectable (**FIGURE 2**). In 2014, nearly 70% of TVs shipped globally will be network-enabled, though not necessarily web-enabled, In-Stat noted in a separate January 2011 report.

FIGURE 2
Source: Consumer Electronics Association
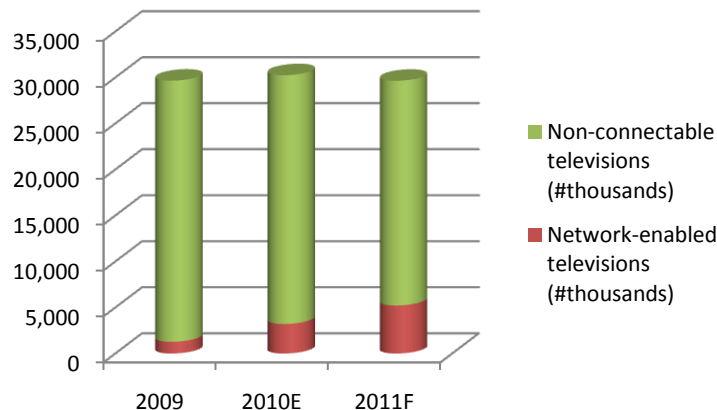
Additionally, more people will upgrade to 3D-capable TVs long before the bandwidth necessary to stream 3D titles over the Internet will be sufficient for a quality viewing experience. Annual 3D-enabled TV sales will more than triple to 1.91 million units in 2011 from 600,000 in 2009, according to the CEA.

Video Game Consoles
Another factor that may lengthen the tail of DVD demand is the widening base of video game consoles being used to watch movies. About 46 million U.S. households had video game consoles in 2009, about half the number of households with DVD players, according to the Entertainment Merchants Association. Many of the video game households have either Microsoft Xbox 360 or Sony PlayStation consoles, which both double as DVD players (and, in PlayStation 3's case, Blu-ray players).

According to The Nielsen Company in May 2010, when asked why they wanted to purchase the console, potential Sony PlayStation 3 purchasers cited, "I want the Blu-ray capabilities" 65% of the time, ranking first amongst motivating factors. According to the EMA, Xbox 360 users were about half as likely to watch DVDs on their consoles as they were to play video game titles, and about twice as likely to watch DVDs on their consoles as to use them to download or stream movies.

Such "double-duty" trends for video game consoles were most recently reflected in a Nielsen report released in March 2011, which found that about 50% of so-called "7th generation" video game consoles are set up in living rooms, where they can be used both for DVD watching and game playing. Meanwhile, about 19% of the most recent generation of consoles are used in kids' bedrooms, Nielsen said.

Physical Media: Format Evolution

DVD
The advent of the Internet has often been deemed the death of physical content (e.g. books, music and movies). Though physical media demand has been on the decline, most analysts note that it won't be overtaken by digital delivery anytime soon. In fact, adding together the impact of brick-and-mortar stores, kiosks and DVD subscription services, DVD rental demand will be about the same in 2014 as it was in 2008. Physical rental is also projected to have three times the market share as digital rentals in 2014, indicating that the obsolescence of physical media within the home video market is not a near-term event.

Even as digital use increases and broadband penetration of U.S. households surpasses the 90% level in the next few years, it may be years before digital accounts for just half of the home video rental market.

Blu-ray Disc
With high-definition televisions becoming the norm, the development and growth of Blu-ray Discs may extend the viability of packaged media as the primary home video medium. Blu-ray rental and sell-through spending are growing faster than video on demand, as a broader customer base of high-definition television owners is looking to upgrade its home video experience by buying progressively cheaper Blu-ray Disc players and choosing from a broader inventory of high-definition titles.

In 2010, Blu-ray spending increased 53% to $2.3 billion, while video-on-demand spending increased 21% to $1.8 billion, according to DEG. This spending reflects the widening popularity of Blu-ray Disc players, whose U.S. shipments will total 13.2 million this year, up from 7.1 million in 2009, according to the CEA (**APPENDIX A**).

VHS Comparison
With the momentum of Blu-ray, DVD usage doesn't appear to be mimicking the demise of video cassettes that took place a decade ago. This may be because there isn't another physical medium ready to take the place of DVD, just as DVD replaced VHS. There is sustaining consumer value in tangible (thus portable and sharable) content.

From 1999 to 2003, VHS rental revenue plunged 43% from $12.3 billion to $6.9 billion, according to DEG. Four years after the DVD rental peak of $20.2 billion in 2006, physical movie media (i.e. DVD plus Blu-ray) had fallen just 19% to a combined $16.3 billion, indicating that the video disc will have a far longer lifespan than VHS.

Industry Influences

Studio Influence: Home Video Market
DVDs remain a studio cash cow. Studios shipped more than a billion DVDs and 170 million Blu-ray Discs to retailers in 2010, according to DEG.

Home video spending has been on the decline, with U.S. consumer spending jumping from $13.9 billion in 1999 to a peak of $21.8 billion in 2004, but then falling for six straight years to $18.8 billion in 2010, according to DEG (**FIGURE 3; APPENDIX B**). The pullback can be blamed on the combination of a recession-spurred decline in consumer spending and the fact that people added to their DVD collections at a slower pace as the "must-have" catalogue-type titles had largely been purchased over the previous decade.

FIGURE 3
Source: Digital Entertainment Group
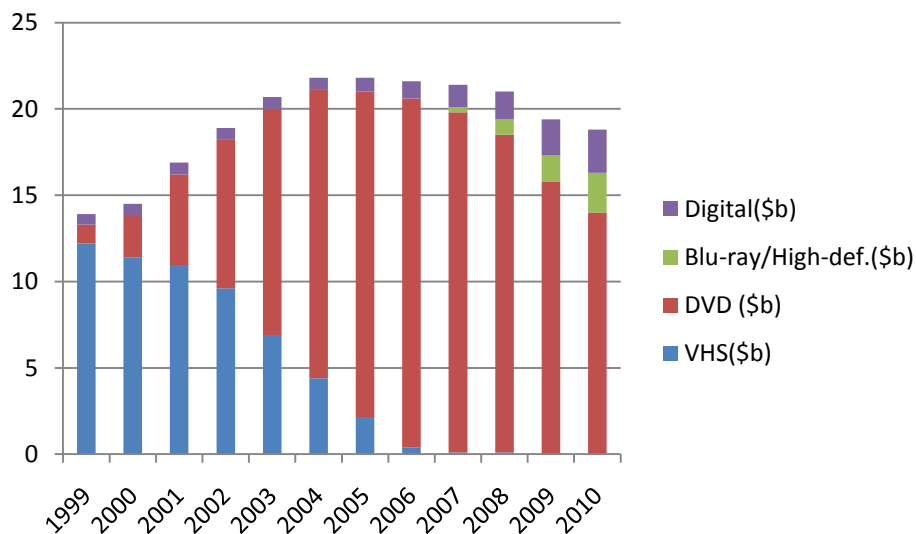
Digital distribution is taking a bigger piece of the pie, accounting for 13% of U.S. home video spending in 2010, up from 11% in 2009 and just 7.6% in 2008. While three quarters of that category is video on demand, broadband video spending is growing, increasing 16% in 2010 to $683 million.

Studios may be resistant to jeopardize this income with new, relatively unproven distribution methods. Studios have long tried to get returns on multimillion-dollar investments in theatrical releases in part through home video releases, and Americans have validated this strategy.

Americans in 2009 spent $20 billion on home video, which accounted for 50% of studios' filmed entertainment revenue, compared with 32% for theatrical revenue, 12% for pay television/premium cable and 7% for on-demand movies, according to the Entertainment Merchants Association (EMA).

Americans spent about $18 billion buying and renting DVDs and Blu-ray Discs, and about $2 billion watching movies by way of video on demand or electronic sell-through. In short, a studio that may have failed to recoup the cost of producing a film often did so through home video, and, while digital is on the rise, 87% of that home video revenue was attributed to packaged media as of 2010.

Technological Advances

Digital: Growth Prospects
Digital distribution has grown from less than 5% of U.S. home entertainment spending in 2005 to more than 13% in 2010, reports the DEG. Moreover, access to content has improved dramatically. The dominant physical players – Netflix, Blockbuster and Redbox – have entered or noted their intent to enter the digital space. Amazon.com and Apple have also entered the digital distribution marketplace.

Bandwidth access and capacity remain issues in the U.S. as more people gain access to broadband Internet. More than 85 million U.S. households will have broadband access in 2012, up from about 70 million in 2009. The average amount of bandwidth available per household doubled between 2006 and 2009, according to International Data Corporation (IDC). Internet connection speed remains a concern, with consumer questions over video quality and streaming/downloading times, especially for those with spotty Internet connections and those who are accustomed to high-quality physical media content.

As Blu-ray/high definition home video becomes the norm, digital could require some consumers to downgrade their viewing experiences or opt out of new features. For example, 3D content requires about twice the bandwidth as conventional 2D, and few U.S. households in the near future will have access to the bandwidth needed to download high-definition and 3D movies in a timely fashion.

Digital Music Comparison
One only needs to look to the music industry for a cautionary tale about how quickly physical media may be replaced by digital. Apple introduced its first-generation iPod in 2001, and by 2008, Apple passed Walmart to become the largest music retailer in the U.S.   The surging popularity of Apple's digital music player and an iTunes setup allowed customers to buy music by the song, not just by the album.

Still, many music fans value physical media. While digital music has made a stunning rise in the past decade, it accounts for only about 40% of purchased music in the U.S., compared to about 60% for compact discs, according to the Recording Industry Association of America (RIAA).

Regardless, history doesn't appear to be repeating itself when it comes to the home video transition from physical to digital, as reported by the DEG, IHS Screen Digest, SNL Kagan and other media research firms. Data storage needs are far greater with video, the piecemeal method of content purchase doesn't apply (i.e. people don't buy sections of movies), and the experience lies in a hardware device – i.e. a large screen – that is larger and less portable than an iPod or iPhone.

Conclusion
The advent of new technology and distribution methods, though breakthrough, is not always a metamorphic event. The pace of adoption is dictated by multiple sources: industry influence, consumer demand and access. It is possible that DVD/Blu-ray and digital content will continue to exist in concert as reduced costs, industry evolution and consumer access make way to a gradual transition to digital.

While digital is an important and growing segment of the home video market, physical media rentals are projected to account for the lion's share of rentals through 2015. The backbone of a multi-billion-dollar industry, DVDs and Blu-ray Discs will be a significant factor in the home video consumption habits of Americans for years to come.

Appendices

Unit Sales to Dealers (000's)			2009	2010E	2011F	COMBINED
High-definition televisions		#	29,662	30,255	29,650	89,567
	% change	%		2.0%	-2.0%	
Network-enabled televisions		#	1,279	3,210	5,222	9,711
	% of total	%	4.3%	10.6%	17.6%	10.8%
3D-enabled televisions		#	600	1,145	1,912	3,657
	% of total	%	2.0%	3.8%	6.4%	4.1%
Televisions with embedded Internet applications		#	749	2,419	3,968	
HD televisions without network capabilities			28,913	27,836	25,682	
	% of total	%	97.5%	92.0%	86.6%	
Blu-ray Disc players		#	7,088	10,916	13,208	
	% change	%		54.0%	21.0%	
Network-enabled Blu-ray Disc players		#	5,449	8,729	10,737	
	% of total	%	76.9%	80.0%	81.3%	
Wi-fi embedded Blu-ray Disc players		#	N/A	327	661	
3D-capable Blu-ray Disc players		#	N/A	1,856	5,100	
Total DVD players (non-Blu-ray)		#	21,026	20,208	19,216	
Total DVD and Blu-ray players		#	28,114	31,124	32,424	
	% change	%		10.7%	4.2%	

Resulting Shipment Revenues (Millions)			2009	2010E	2011F
High-definition televisions		$	21,670	19,009	18,070
	average price	$	731	628	609
Network-enabled televisions		$	2,239	4,272	5,212
3D-enabled televisions		$	708	1,865	2,740
	average price	$	1180	1629	1433
Televisions with embedded Internet applications		$	1,345	2,824	3,937
Blu-ray Disc players		$	1,121	1,519	1,595
	average price	$	158	139	121
Network-enabled Blu-ray Disc players		$	850	1,249	1,405
Wi-fi embedded Blu-ray Disc players		$	N/A	41	78
3D-capable Blu-ray Disc players		$	N/A	343	790
Total DVD players (non-Blu-ray)		$	1,688	1,193	1,071
	average price	$	80	59	56
Total DVD and Blu-ray players		$	2,809	2,712	2,666

APPENDIX B Source: Digital Entertainment Group

U.S. Rental and Sell-Through Home Entertainment Spending ($billions)

	VHS($b)	DVD ($b)	Blu-ray/High-def.($b)	Digital($b)	TOTAL
1999	12.2	1.1	0	0.6	13.9
2000	11.4	2.4	0	0.7	14.5
2001	10.9	5.3	0	0.7	16.9
2002	9.6	8.6	0	0.7	19
2003	6.9	13.1	0	0.7	20.7
2004	4.4	16.7	0	0.7	21.8
2005	2.1	18.9	0	0.8	21.7
2006	0.4	20.2	0	1	21.6
2007	0.1	19.7	0.3	1.3	21.4
2008	0.1	18.4	0.9	1.6	21
2009	0	15.8	1.5	2.1	19.4
2010	0	14	2.3	2.5	18.8