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Internet video: Ready for prime time?

Usage is soaring, but viewing remains diffused

January 2009

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Summary: Internet video's mainstream migration has transformed the way millions of people use video, challenging longstanding assumptions about how, when and where TV shows are watched. Yet despite rapid growth in popularity and usage, the amount of time Internet video users devote to the medium is a small fraction of the time they spend watching traditional television, and there is little evidence to suggest Internet video has carved significantly into traditional viewing patterns. In fact, early research findings suggest Internet video may be triggering additive interest and usage of video at large.

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Internet video content availability and usage have grown dramatically as a result of improved user experiences, fortified broadband networks and an impressive range of programming available at the click of a keyboard or a computer mouse.

Once dismissed as a sort of novelty or derided for producing poor user experiences, the online video medium has grown up fast. In addition to a bounty of short-form video content, the Internet today is populated with programs created by some of the most talented producers, directors and actors in television, with excellent picture and sound quality and only modest commercial interruption. Online video is no longer the province of rogue websites delivering pirated versions of copyrighted content. On sites like Hulu.com and Fancast.com, current-season full-length TV shows like NBC's "30 Rock" and Fox Broadcasting's "Family Guy" spring to the screen with just a few clicks, at no cost, and with full and willing authorization from their owners. Networks and program rights-holders that once were skittish about delivering content online have made a wholesale conversion to the platform. A research analyst with Forrester Research recently calculated that about 90 percent of prime-time network TV shows are available online. Elsewhere, commercial-free movies are available online both through streaming services such as Netflix Inc.'s "Watch Instantly" and download repositories such as Apple Inc.'s iTunes.

An analysis of available full-length content from some of the most popular Internet-video repositories illustrates how content is migrating to the Internet.

Online Video: Full-length TV Shows available by portal, 2008 v. 2007

	2008	2007	% CHG.
iTunes	21,861	10,329	112%
Hulu*	5,524	1,068	417%
Fancast	6,090	3,587	70%
Xbox Live*	12,506	9,675	29%
YouTube (partner channels)	55,325	49,475	12%
AOL	6,822	9,032	-24%
Amazon	14,867	10,883	37%
Joost	2,714	1,302	108%
Portal subtotal	**125,709**	**95,351**	**32%**

*NOTE: Hulu and Xbox Live data for 2007 drawn from April 2008. All other 2007 data from October 2007.

Source: One Touch Intelligence, from provider data. November 2008

High-speed Internet lines that now reach close to 65 percent of U.S. homes are a big driver of the online video revolution. So are fortified digital-rights management software applications that have helped to allay some fears of unauthorized content distribution. The user experience in general has come a long way since the early popularization of Internet streaming media technology in the late 1990s, which was characterized by frequent stream lapses, small viewing windows and cumbersome media software requirements. Today most popular online video sites embed video player software within their own sites, so that videos play almost immediately without the need for special external software.

Technology continues to advance in a way that could foster even more interest and usage of online video. There is also a vigorous effort under way from a number of participants to reconcile online video's computer-based heritage with the living-room TV environment. Apple, Netflix, Microsoft, consumer electronics companies and a growing number of start-up ventures are bringing to the marketplace new devices that capture and display online video content on the TV set — an important technology advancement that may invite even wider adoption of Internet video.

As television industry participants experiment and reckon with this disruptive but promising new medium, some of their most pressing questions surround the impact of online video viewing on traditional viewing sources and habits. And rightly so: Exactly how the emerging online video medium affects and influences incumbent television platforms such as linear broadcasting, pay television channels and other means of video distribution has enormous implications for the economic performance and the future of the television industry at large.

In this research report, we examine a growing body of research that illuminates and helps to answer those questions.

A variety of recent studies proves that consumers are flocking to Internet video. And a new breed of devices designed to import online video directly to the TV set could widen its appeal even more. But a close look at the research indicates users are devoting only a small amount of time to watching online video, vs. traditional television. What's more, the vast majority of online video being watched today is short-form video made or optimized particularly for the Internet.

There's a broad consensus among researchers that online video has made the transformation to the media mainstream, at least from a user base standpoint. "Watching video on the Internet is no longer a novelty," The Nielsen Co. said in a May 2008 report on television viewing. "Nearly 119 million unique viewers viewed 7.5 billion video streams in May 2008. The average viewer spent 2 hours and 19 minutes in May streaming video online."

According to the research firm comScore, the monthly volume of Internet-video consumption is measured in billions of individual video streams. The firm's October 2008 summary of Internet video activity estimated that U.S. Internet users watched more than 13.5 billion online video programs in the month. Among findings from the comScore research:

- The duration of the average online video was 3 minutes.
- 77 percent of the total U.S. Internet audience viewed online video.
- The average online video viewer watched 274 minutes of video in October 2008.

Other researchers have encountered evidence that is similarly impressive in suggesting a flock to online video. ABI Research, in a September 2008 report on online video trends, found the percentage of U.S. online households in which residents have watched streamed online video nearly doubled in a year, to 63 percent in 2008 versus 32 percent in 2007.

The impact of rising online video penetration can seem dramatic in some individual cases. According to a Solutions Research Group survey of 500 viewers, more than half of the people who watched comedian Tina Fey's impressions of Alaska Gov. Sarah Palin on the NBC program "Saturday Night Live" during the fall of 2008 saw the vignettes on YouTube, NBC.com, Hulu.com or another Internet site. When the NBC Universal comedy "The Office" began its fourth season in September 2007, the premiere episode attracted a television audience of 9.7 million viewers — and generated 2.7 million separate online video stream requests.

"(Viewers) aren't spending a lot of time watching full length TV shows on the Internet. They are watching clips."

Turner Broadcasting System
Chief Research Officer Jack Wakshlag,
from a December 2008 press briefing.

Enabling factors

Broadband data connections are among the key instigators of rising video availability and usage. According to a Q1/2008 survey by Leichtman Research Group, 11 percent of broadband Internet subscribers in the U.S. view video online daily, and 25 percent watch online video at least once a week.

Also underscoring broad appeal of online video, a 2007 Pew Internet & American Life Project study found 57 percent of Internet users have watched videos online, and 74 percent of broadband users have at some point watched or downloaded online video.

Video's growing stature on the Internet is reflected by statistics that measure Internet data traffic. Cisco Systems Inc., a leading supplier of technology that routes data traffic along the Internet, has predicted a six-fold increase in total Internet traffic between 2007 and 2012, largely triggered by rising online video activity.

Monthly consumer Internet traffic worldwide, by segment (in petabytes)

	2009	2010	2011	2012
Peer to peer	3,075	3,981	5,161	6,740
Online video via PC	2,196	3,215	4,501	6,216
Online video via TV	756	1,422	2,348	3,529
Web, email and data	1,336	1,785	2,337	3,087
Gaming	252	324	399	490
Video communications	49	70	103	154
VoIP	72	87	101	114
Total	**7,736**	**10,884**	**14,950**	**20,330**
Online video % of total	**38.2%**	**42.6%**	**45.8%**	**47.9%**

Source: Cisco Systems

There is also growing anticipation of the business possibilities of online video, thanks in part to the development of devices that stream Internet video directly to TV sets. "New connected products that link to premium Internet services are emerging at a rapid pace, moving the Internet video viewing experience into the living room. This shift will help grow revenues considerably," said Kurt Scherf, vice president and principal analyst for the research firm Parks Associates. A projection by Parks Associates released in August 2008 suggests TV-based Internet video revenues will rise to more than $4 billion by 2013 from slightly below $1 billion in 2008.

Findings like these, and others, have given weight to a popular impression that online video is rapidly accelerating in reach, appeal and use. "Video on the web seems to have become an overnight media sensation," a March 2008 article in the cable television industry publication *Multichannel News* said. A *New York Times* article published in the same month declared that "Watching television episodes on a computer screen is now a common activity for millions of consumers."

What gets watched

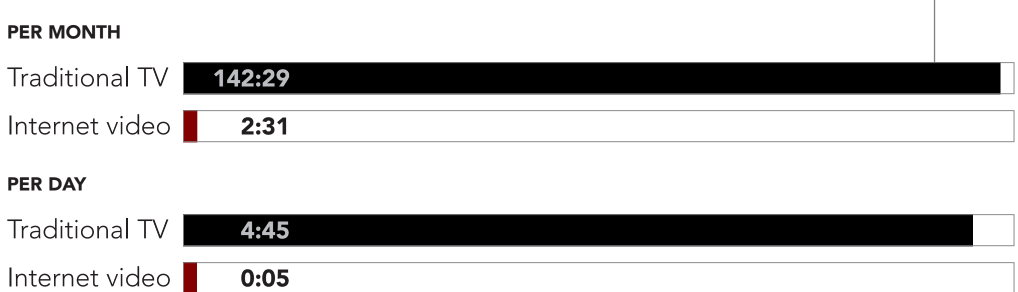
Despite the urgent tone of some recent headlines, a closer look suggests there are important differences between video usage on the Internet and on traditional television.

The fact that Internet video at large is rising markedly in popularity does not suggest a wholesale migration of traditional TV viewing patterns to the Internet. Instead, the type of content driving usage is very different on the Internet than it is on the living-room television set. Despite a healthy proliferation of full-length episodic TV programming available online, the large majority of Internet video viewing comes in brief exposures to short snippets or segments, according to several studies of user behavior.

Prominent online video research providers Nielsen and comScore differ in their read on exactly how much time online video users devote to the medium. But their findings are consistent in portraying online video usage as remarkably small, judged against traditional television viewing time.

- More than half of adults who watch online video spend 10 minutes or less in a viewing session, according to Leichtman Research Group's Q4 2007/Q1 2008 Emerging Video Services study.
- According to a comScore study from October 2008, Hulu.com's average viewing duration of 11.6 minutes is the highest among measured Internet video providers.
- A Nielsen Co. survey of Internet video usage published in November 2008 found the average amount of time users spend watching online video is two hours and 31 minutes per month, or less than five minutes per day. In contrast, viewing to traditional television accounts for more than four hours per day for the average viewer, Nielsen reported.

Time spent watching video by medium (hours:minutes)



Source: One Touch Intelligence analysis of Nielsen data

In part, these findings reflect the type of video content that gets the heaviest demand online. Leichtman Research Group's Emerging Video Services study found news clips are the most commonly watched type of video online. The next most popular forms of video watched from an online source are user-generated videos, comedy clips and sports news or highlights.

To be sure, the numbers add up to an impressive total. Numerous research reports about Internet viewing routinely measure "Internet video" as a single category that spans everything from brief snippets of amateur video on YouTube to full-length episodic TV dramas. Thus, by amassing total online video viewing into a single bucket, the reports suggest a startling migration of viewing to the Internet. But that generalized view tends to mask more meaningful observations about differences between Internet video viewing and mainstream television viewing. In fact, most recent research suggests full-length TV shows and movies generate only a small fraction of total Internet video usage.

Viewers do appear to be enjoying full-length TV episodes and movies online, but to a much smaller degree than their attention to short-form video. About 9 percent of the 1,200 adults Leichtman Research Group surveyed said they'd watched a recent episode of a full-length, current TV show, for example.

The popularity of short-form videos influences rankings of the most popular online video portals. Within the Internet video mix, one dominant source of viewing emerges in the form of YouTube, the Google-owned repository of hundreds of thousands of video titles, the majority of them clocking in at only a few minutes. According to comScore, Google's video properties (with YouTube by far the most prominent) accounted for 39.7 percent of all Internet videos viewed by U.S. Internet users in October 2008. In contrast, Hulu, the high-profile aggregator of mainstream television programming and full-length TV shows, accounted for just 1.7 percent of online videos viewed in the U.S.

What's more, the top 10 online video sites together account for only about two-thirds of all measured video, meaning the remainder is divided among numerous small properties — evidence that the online video market is highly fragmented.

Top U.S. online properties by videos viewed, October 2008

PROPERTY	VIDEOS (000)	SHARE (%) OF VIDEOS
Total Internet	**13,536,595**	**100**
Google sites	5,373,783	39.7
Fox Interactive Media	519,926	3.8
Yahoo! sites	363,426	2.7
Viacom Digital	305,258	2.3
Microsoft sites	286,464	2.1
Hulu	235,096	1.7
Turner Network	228,024	1.7
Disney Online	126,611	0.9
AOL	122,580	0.9
ESPN	104,724	0.8

Source: comScore Video Metrix

True, sites such as Hulu, Fancast, Veoh, Joost and other portals that deliver full-length videos are relatively new, and could gain substantial momentum. The growing range of full-length video content available online, coupled with rising consumer awareness and usage of online video at large, suggests viewing of full-length programs could increase over time.

But for the time being, there appears to be strong consumer sentiment favoring the traditional living-room television as the means of viewing full-length programs.

Findings from a telephone survey of 1,200 adults published by the cable industry organization CTAM underscored the appeal of television over computers and other devices.

"Among adults across all multi-channel video households, the overwhelming majority (94%) prefer to watch television programs on a traditional TV set compared to viewing on the computer (1%), through a handheld portable video device (1%) or through a cell phone (1%). Although these alternative platforms may make it more convenient to watch television anytime, anywhere, they are not an ideal way to view programs," the CTAM report found. "Television, with its larger screen, continues to create a more ideal setting."

That relatively strong preference for the full-sized TV may help to explain why shorter-form video tends to dominate online video viewing.

As many have pointed out, that predominance of the television monitor is likely to continue for some time as high-definition TV rises in popularity and viewers gravitate toward the most convenient means of watching programs. Movies, in particular, stand to benefit from the HD migration because of technical challenges involved in presenting HD full-length films over the Internet. "You can drive to our local store and rent a Blu-ray disc in less time than it will take you to download a movie in high-def," Jim Keyes, the CEO of retailer Blockbuster Video recently told the *New York Times*.

It's possible that entrants such as Vudu, Apple TV, Netflix and Microsoft's Xbox may have some success over time in convincing viewers to install and use dedicated set-top boxes that transcode and display Internet video signals on TV sets. TV set manufacturers, too, could spur more interest in Internet video by including Ethernet connections and web-browsing applications in new editions of off-the-shelf TVs. But the adoption curve for these add-on devices and technologies is likely to be slow in our view, partly because mainstream viewers appear to be highly satisfied with incumbent video delivery systems such as cable and satellite TV; and partly because of general consumer resistance to the idea of buying and installing an additional set-top receiver.

Television industry participants have voiced concerns about the possible impact of online video viewing on traditional viewing sources. But recent research shows an increase in traditional TV viewing and an overwhelming disparity in time spent on television vs. online video.

Even as a variety of television networks, cable companies and pay TV participants encroaches further and further into the world of online video delivery, there is considerable trepidation about the unknown.

A common theme expressed or assumed within the television industry at large is that online video looms as an enemy or usurper of traditional TV viewing. The refrain of "cannibalization" rings out from many quarters of the industry. If more people are spending more time watching video over the Internet — and they surely are, according to a range of credible studies — then common sense tempts us to deduce that they're doing so in replacement of other means of watching television.

Wall Street, too, has exhibited signs of concern about the impact of online video delivery. In July 2008 a securities analyst, Lehman's Anthony DiClemente, issued a broad downgrade of entertainment industry stocks, saying the online media migration threatened to disrupt the economic models that have long supported movie studios and television networks. He — and others — have pointed to the abrupt decision by the CW Network to withdraw episodes of the TV series "Gossip Girl" from the network's website, reportedly out of fear that its availability was eroding the program's traditional television ratings.

Presumptions about cannibalization take into account certain realities of the modern television environment and the way people interact with media content. One unmistakable fact of life is that there is a finite amount of time available to everyone. If millions of people are now devoting time and attention to a medium that only recently has sprung to life, again it seems logical to conclude they're reducing at least a small amount of time once devoted to traditional TV and spending it watching content online instead.

Anecdotally, this conclusion almost universally seems to be supported by personal observation. Nearly everyone who thinks about online video and the future of television can point to a teenager or college student they know who has seemingly eschewed old-fashioned "television" in favor of watching video content over an Internet-connected PC, iPod player or other digital device. By coupling these first-hand observations about the habits of the emerging TV generation with news reports about the rising popularity of online video consumption, it's easy to conclude that old ways of watching are at risk of being supplanted by new and intriguing online video possibilities.

Cable television providers in particular have expressed misgivings about the potential impact of online video availability on the business of providing television content to customers for monthly subscription fees. If many of the same programs they deliver for a fee are freely available online, their reasoning goes, the value of a cable subscription becomes devalued.

"It is still worth saying these are very small numbers. We are talking about one percent of the population that is actually watching over an IP signal rather than a traditional cable or other type of hook up."

Jeffrey Rayport, former Harvard Business School Professor/Founder and chairman, Marketspace LLC, from November 2008 CTAM Summit conference

To be sure, online video already is exerting a disruptive force on the television business, leading some to embrace the new medium, others to look warily at it, and still others to play on both sides of the fence by simultaneously guarding their flanks and experimenting with Internet delivery.

But as uncertainty about the influence of online video prevails, it may be important to keep in mind the relative contribution of Internet video activity within the larger picture of television. Nielsen's Q3 2008 "Three Screen Report" portrays an impressive audience for Internet video, to be sure, at more than 118 million users ages 2 and older. But juxtaposed against a wider view of television viewing, it illustrates that the Internet produces an extremely small amount of total TV viewing in the U.S. — 2 hours and 31 minutes per month, vs. 142 hours and 29 minutes per month for in-home television viewing.

Video viewing: television vs. Internet, Q3 '08

	NO. OF USERS (000s)	TIME SPENT PER MONTH (HOURS:MIN)	AGGREGATE VIEWING HOURS (IN MIL.)
Watching TV in the home	282,289	142:29	40,221
Watching video on the Internet	120,708	2:31	303

Source: One Touch Intelligence analysis of Nielsen data

Nielsen's research suggests Internet video viewers spent an average of barely over five minutes a day watching Internet video in the third quarter of 2008. Separately, a comScore report from July 2008 estimated the average Internet video user spent 7.8 minutes per day watching online. Even assuming comScore's larger number is valid, the amount of time people are devoting to watching online video pales markedly vs. the amount of time — about 4 hours and 24 minutes per day, according to Nielsen's study — that people spend watching over television in the home.

"It means 7.8 minutes per day, per user. It's diminutive," commented researcher Bruce Leichtman, whose firm, Leichtman Research Group, conducts consumer surveys on media and telecommunications usage.

What's more, Leichtman notes online video usage is driven disproportionately by men 18–34, who substantially over-index the U.S. norm (although they still use traditional television for more than 90 percent of their video viewing). For a typical adult, online video accounts for just a few minutes a day, Leichtman said.

A 2008 survey of 1,250 U.S. adults by Leichtman Research Group found 25 percent of all broadband Internet users watch online video weekly, while 55 percent of men 18–34 watched online video weekly. The relatively popularity of online video among the young-male demographic should not be overlooked, Leichtman said, because it may translate to a reduction in viewing of traditional television within that particular demographic. In fact, 16 percent of men ages 18-34 who watch video online said they strongly agree that they watch TV less often than they used to, vs. 6 percent of all others who said they watch TV less often.

But as Leichtman pointed out, it's tempting to observe data points about stream demand and projected growth and deduce, incorrectly, that Internet video is storming the television world and quickly displacing legacy viewing behaviors. It's true that rising availability of Internet video appears to be having some modest impact on viewing habits of younger men, Leichtman said. But a broader perspective suggests that overall, online video is having only a slight impact on media consumption patterns across the general populace. "When you stay away from the hype, you actually see the truth," he said.

Sensing that the immediate threat of participating in the online video category may be limited, TV networks have entered the Internet video domain out of a faith that the presence of their programs online enhances overall audience exposure, rather than eroding traditional channels for viewing.

In some cases, the availability of TV shows online offers a second chance for fans to see programs they may have missed on their network TV airing. According to NBC Universal, 83 percent of the users of its NBC.com website who responded to a 2008 survey said they watched a show on NBC.com because they had missed the network premiere.

Alan Wurtzel, the president of research for NBC Universal, told the Wall *Street Journal* in an October 2008 article that "We see no evidence of a substantial number of people choosing to watch online instead of on television."

A similar point is reflected in a study of "non-traditional" TV viewers conducted by synovate for the premium television provider Starz Entertainment. The study found that only 1 percent of individuals who watch video online claim they don't watch television from traditional sources such as over-the-air or cable channels.

That's not to suggest there is no erosion whatsoever of traditional TV viewing thanks to the emergence of the Internet as a mainstream source for television content. A July 2008 survey of 3,200 panel participants by Integrated Media Measurement Inc. found that more than 20 percent of viewers said they watched some prime time shows online. Of that subset of viewers, the survey found about half said they'd watched online instead of on television. According to IMMI, "50 percent are watching programming as it becomes available and appear to be beginning to use the computer as a substitute for the television set. The other 50 percent are using the Web as a tool to watch past programming they have missed, or to re-watch segments of episodes they have already seen."

Time dimension

Generally, there is a temptation to overestimate the immediate impact of new and disruptive technologies. In the 1950s, for example, some media industry theorists believed the onset of broadcast television would quickly spell the end of the movie theater business and the radio business. Both, of course, have been affected by television, but neither has been extinguished because of it. Similarly, projections about the demise of the traditional landline phone business were regularly advanced as cellular phone technology came into prominence beginning in the 1980s. Even as cellular phone ownership has outstripped the number of landline phone connections in the U.S., however, the nation remains firmly tethered to traditional phones, which today continue to enjoy a household penetration level of more than 84 percent. While mobile phones have contributed to some erosion in the landline phone category, it has taken more than 20 years for them to make a relatively modest dent in overall phone-line penetration. More telling, perhaps, is that most Americans use both a landline phone and a mobile phone — rather than one over the other. This supplementary quality — one newer medium finding a place in life as an addition to another, rather than a replacement — is a common refrain of media technology over many decades.

That conclusion may be underscored by the recent experience of NBC in televising the 2008 Summer Olympic Games from Beijing. NBC attracted an audience of 214 million people on its television networks and 52 million to websites it provided. But according to Wurtzel, who reviewed findings at a conference presented by the Interactive Advertising Bureau, 90 percent of all NBC Olympics content came via the television set. There was "absolutely zero cannibalization" of TV viewing by Internet viewing, Wurtzel said.

Online video may have different levels of impact on different types of television viewing, with movie rentals on DVDs and VOD in particular more vulnerable to displacement than traditional networks and channels.

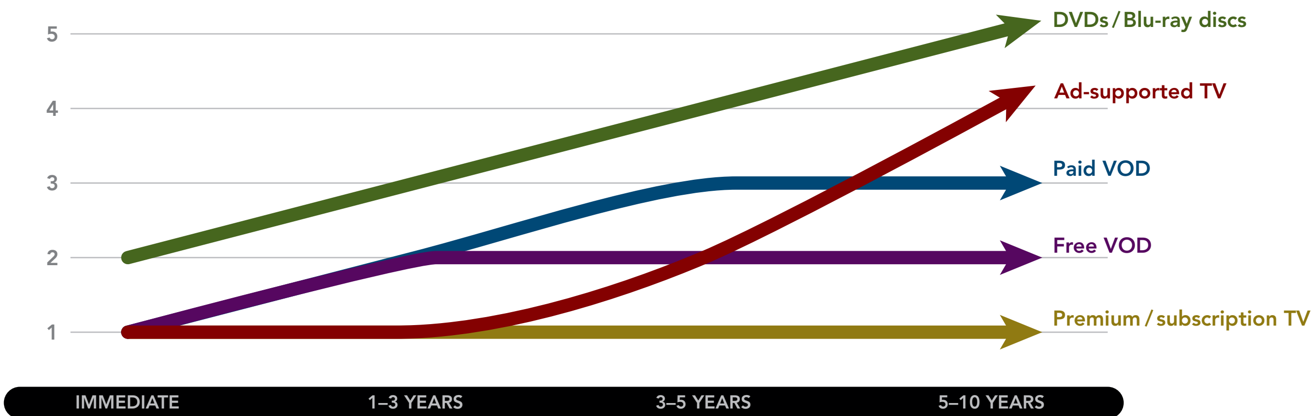
In the same way that measuring "Internet video" at large produces only a generalized view of the medium's impact, attempting to derive an overarching conclusion about online video's impact on the "television industry" is a questionable pursuit.

There are, of course, many different categories of television, and each may be influenced by online video differently. Also, the impact of online video on sub-segments of the television industry may be very different today from the impact levied several years from now.

Generally, we believe media that rely on fees for pre-recorded *individual* program titles — these include DVD movies and paid video-on-demand — are most vulnerable to online video replacement. Subscription and ad-supported media, in contrast, seem less vulnerable to online video encroachment, at least in the short term.

Risk exposure to online video

Risk factors (1 = low, 5 = extremely high)



Source: One Touch Intelligence

DVDs/physical media: In the short term and possibly for the remainder of its lifespan, the industry segment most likely to encounter a negative impact from online video may be the physical-media component, which relies on the sale or rental of fixed media products — DVDs, in particular — to provide viewing experiences to customers.

This view appears to be shared to some degree by the dominant retail participants in this sector, Netflix and Blockbuster Video, both of which have begun initiatives to add online-streaming alternatives to their DVD rental services, reflecting a belief that physical video disks may come under siege in the same way that music CDs have become marginalized by online music distribution. Hollywood studios, too, are experimenting with new web-based platforms for delivering movies in streaming and downloaded formats.

The efforts come as DVD sales have been flat — hovering around 1.6 billion units — since 2005, according to sales figures compiled by DEG: The Digital

> "Streaming video from the Internet and other means of direct digital delivery are going to put optical formats out of business entirely over the next few years."
>
> Roger Kay, president, Endpoint Technologies Associates, from January 2009 *New York Times* article

Entertainment Group. But domestic DVD sales dropped 3.2 percent in 2007 for the first time, to $15.9 billion, according to estimates by the industry research firm Adams Group. The falloff appears to have steepened since then. In the third quarter of 2008, sales tracking service Nielsen VideoScan reported a 9 percent drop in DVD sales for major retailers (with the exception of Wal-Mart Stores Inc., which does not participate in the VideoScan survey).

Some industry participants believe a decline in DVD sales is inevitable as high-quality online movie download services become more broadly available. The question is timing. The CEO of Blockbuster Video told the *New York Times* in November 2008 that "digital downloads are not going to dominate the industry tomorrow," but expressed hope that a new Internet-video download platform Blockbuster is releasing will tap into growing demand for downloaded movies.

In a Nov. 9 presentation to a UBS Global conference on media, Netflix CFO Barry McCarthy said the company believes it will be "years and years" before there is widespread adoption of the Netflix video streaming service.

Lehman, among the most bearish of prognosticators, projects sales of pre-recorded DVDs will plummet to 340 million by 2015 from 1.01 billion in 2008 as video on demand and online alternatives grow in popularity. "Based on previous historical technology replacement cycles, we have concluded that the longer-term DVD sales model is one of accelerated decline," wrote Lehman analyst DiClemente in a 2008 research report. He based his reasoning on factors including recent declines in DVD sales plus growing likelihood of PC/TV integration technologies that would make watching downloaded movies more attractive.

"What we do know is that if we don't launch it, somebody else is going to."

Netflix CFO Barry McCarthy, commenting on the Netflix streaming-video service at a UBS Global Media and Communications Conference. December 2008

DVD vs. VOD trends, 2009–2015

	2009	2011	2013	2015
DVD units sold (in mil.)	907.8	695.0	508.1	341.6
VOD + iTunes revenues to studios ($ in mil.)	$567.7	$1,088.7	$1,820.3	$2,549.6

Source: Lehman Brothers, from various analysts' estimates

Others also believe online movie downloads will emerge rapidly as a source of revenue. eMarketer projects U.S. digital movie download spending will reach $846 million by 2011, vs. $245 million in 2008.

U.S. Digital Movie Download Spending, 2006–2011 ($ in millions)

2007	2008	2009	2010	2011
$35	$114	$447	$651	$846

Source: eMarketer, August 2007

We believe DVD and Blu-ray disc sales and rentals are vulnerable to displacement over time by online movie services that deliver high-quality movie downloads in a more convenient fashion and at similar price points. Although storage demands of high-definition video formats may preserve the appeal of DVDs and Blu-ray discs for some time, the same dynamics that have hurt physical-media sales in the music category appear to be aligned against physical storage of movies, which may have begun a long-term decline.

It is also true that among types of media, movies on DVD most closely resemble their online alternative — a movie download over the Internet. There is a correlation that may make DVD movies more vulnerable than other types of media that exhibit different characteristics online vs. in their legacy form.

Even so, there is no immediate panic over the idea that the DVD movie category will vanish overnight. At a media industry conference hosted by McGraw Hill in March 2008, Disney CEO Robert Iger said, "I think over the long run there will be some shift especially when it comes to filmed entertainment…you're not going to see hard goods go away, but electronic distribution will grow."

An August 2008 survey of digital media consumers by NPD Group found that although usage of movie download services is growing, it remains relatively minor, with about 2.5 percent of the general population saying they had downloaded movies to own or to rent within the prior 12 months. "We are looking at a very small portion," said NPD Entertainment analyst Russ Crupnick in a news report.

Ad-supported television: Until online video delivery of advertiser-supported television shows can command greater audience shares, it appears unlikely that the online video category will have dramatic economic impact immediately on the traditional ad-supported television category. At the moment, and possibly for several years to come, it appears that television networks and program distributors are benefitting from the additional exposure provided to their TV shows via online viewing. Some, including NBC, are adroitly packaging advertising inventory tied to online exhibition with commercial and sponsorship availabilities from traditional network telecasts, producing revenue increases for certain shows.

While there has been much written about the specter of displacing high-CPM advertising revenues on traditional network TV broadcasts with lower-rate advertising business on the Internet, the ratio of traditional to Internet TV advertising dollars today remains wildly imbalanced. Advertising within video content appearing on websites like Hulu, YouTube and others is estimated (by eMarketer) at only about $505 million in 2008, vs. a U.S. TV advertising market that is estimated by TNS Media Intelligence at around $64 billion.

There's no doubt that ad-supported TV networks will continue to tread carefully in the online video arena for fear of eroding their own core revenue sources. But considering the prevailing viewing trends — a few minutes a day devoted to Internet video vs. more than four hours spent watching traditional television — there is little immediate sign that TV advertising revenue is highly vulnerable in the short term to online video. Les Moonves, the CEO of CBS Inc., told a McGraw Hill conference in March 2008 that "The future of advertising obviously is growing on the Internet quite a bit. The things that will hurt primarily will be print initially, radio somewhat and

> "One of the reasons we're not chasing the Web is that the economic model is just not that strong."
>
> David Zaslav, President and CEO, Discovery Communications Inc., commenting at the November 2008 CTAM Summit about why Discovery offers only brief segments of its TV programs online.

local stations further down. Online advertising is growing…(advertisers) haven't slowed down their TV buy…we view it as additive not subtractive."

Over time, it's possible that audiences will flow toward online sources of ad-supported video in significant measure, especially as TV sets and set-top devices permit direct connections between television equipment and the Internet. This migration will pose risks to the broad category of ad-supported television — as it is traditionally defined — but its economic impact for networks and program distributors may be limited or neutral, so long as they're able to carry over audience levels and advertising rates to the online sector.

VOD/PPV: Transaction-based approaches for delivering movies and pay TV programs over multichannel video systems may be vulnerable to competition from online alternatives, particularly if Internet-to-TV devices proliferate and capture consumer-market traction. For the near term, however, it appears that viewers generally prefer watching movies and high-production value programs over larger-screen TVs and home-theater systems. Insofar as online video remains largely relegated to the PC environment, VOD and PPV distribution alternatives offer a superior viewing experience that should allow them to maintain market supremacy vs. online video in the near term. Over a longer time horizon, we do see the possibility that cable and satellite providers may concede meaningful ground to Internet-based video services that already offer wider and more compelling lists of popular prime time television programs.

As much as any category, VOD may face a pressing challenge from online video alternatives that deliver a broader array of titles and are accessible from a range of screens, including PCs, portable media players and — if the new breed of PC-to-TV bridging devices are successful — living-room television screens.

A different outlook confronts advertiser-supported VOD, defined as the delivery by subscription-TV providers of television content containing commercials or sponsored messages. The medium starts out at a disadvantage to online video because of ongoing difficulties in establishing business models and conditions relating to advertising support on a large scale, and because of raw availability. About 40 percent of U.S. homes are estimated to be able to receive VOD service from a multichannel video provider at the end of 2008, vs. 65 percent that can receive high-quality online video over a broadband Internet connection delivering at least 640 Kbps of downstream data. For the time being there appears to be more momentum in the online video category, at least from a standpoint of advertiser support and prime-time content availability, than there is in the ad-supported VOD category. It's possible ad-supported VOD could gain economic traction as more program content comes to the medium and as programmers and distributors solve business-arrangement and measurement issues.

Premium channels: Subscription-dependent, commercial-free television networks appear to have some built-in defense mechanisms vs. online video encroachment in the form of three factors: Favorable viewing experiences rendered as a result of TV vs. PC comparisons; favorable value and pricing comparisons vs. online movie-download alternatives; and a growing reliance on exclusive, original content that allows premium channel providers to maintain differentiation over services that are purely movie-based. The fact that movie-rich subscription pay TV channels generally are available to consumers for price points of $15 a month or less imbues them with strong value arguments vs. individual movie downloads, which generally cost $3 or more apiece.

Premium channels enjoy some built-in protection vs. online video intrusion because of their reliance on "all you can eat" subscription models that deliver a vast amount of commercial-free content for reasonable monthly fees — a model that has not translated yet to the online domain except for some adult content categories. Premium channels, secondarily, also appeal to viewers who enjoy high-quality HDTV, which remains a work-in-progress over the Internet. In contrast to the similarity between a movie download and a DVD, the trend within the cable and satellite TV sectors to deliver multiple premium channels (or "multiplexes") for one monthly fee produces a value equation that online video providers may find difficult to displace.

We see these trends continuing over several years and possibly longer.

Free VOD: A mixed outlook from a risk standpoint. Many cable industry participants openly worry that a plenitude of high-profile TV shows available online makes current cable VOD services appear to pale by comparison. Yet usage levels and subscriber familiarity with free VOD continue to rise impressively. Our view is that free VOD usage will continue to grow even as online video alternatives are readily available. Free VOD for the time being enjoys a huge quality-of-experience advantage over online video, which remains largely tethered to the PC, rather than the living-room television set, as a primary viewing portal. Also, the rise in HD VOD content gives extra momentum to the category. (Verizon's FiOS multichannel video service offered more than 1,000 HD VOD titles as of late 2008, as did Comcast's VOD service.) There is also a rising-tide theory at work: The rising exposure of online video to mainstream America helps to socialize users to the idea of browsing through menus and guides to identify, start, pause and otherwise manipulate on-demand video. In effect, free VOD and online video share many of the same characteristics, and could ultimately begin to look and feel very similar. There is some early risk to free VOD in the fact that online video services like Hulu offer a wider breadth of high-profile, network-distributed TV shows. But over time, risks may be neutralized if content across both platforms becomes more closely aligned.

Research suggests online video may have the effect of increasing interest and usage of television content as audiences become acquainted with programs, networks and content thanks to exposure over the Internet.

Far from eroding traditional television, it's possible online video availability has had the effect of broadening exposure to video content among people who already watch lots of television.

That's a different conclusion than some cursory examinations may have inspired, but parsing some detailed studies of the online video user base suggests those who watch video online are apt to watch more video elsewhere, too.

"Americans are watching more traditional TV than ever, and we also see an increasing amount of time spent on the Internet and watching video online," Nielsen stated in May 2008 after evaluating the impact of DVRs, online video and mobile video usage.

The finding that traditional TV viewing is higher in the face of online video growth is consistent with other related reports. According to a Spring 2008 analysis of U.S. video consumption, use of nearly all forms of video measured was higher among online video users compared to the U.S. average, and increased from a year earlier in the categories of digital cable, and DVR ownership. The MRI data suggest that despite a considerable increase in online video availability and usage, there is only slight variation of media habits, and in some cases increases in viewing of traditional sources.

Content consumption among Internet video users

ACTIVITY	% INCIDENCE	
	2008	2007
Video tape/DVD rental	8.09	7.77
Subscribe to digital cable	39.38	39.27
Watch any premium services w/in last 7 days	33.03	33.36
Watch Cinemax in last 7 days	8.48	9.14
Watch Encore last 7 days	9.00	8.80
Watch HBO last 7 days	25.50	27.48
Watch Movie Channel last 7 days	5.14	5.20
Watch Showtime last 7 days	12.14	12.02
Watch Starz in last 7 days	10.06	10.56
Watched any VOD programs	22.18	21.50
Has digital video recorder	32.81	26.49
Movie attendance	71.87	72.96
Rented video tape or DVD	18.94	19.76

Base = 25,806 MRI households

Source: MRI, Spring 2008

Usage and penetration dropped minimally for movie attendance, HBO, Cinemax, PPV, and Blockbuster video rentals/purchases. The small declines tied to the premium TV channels HBO and Cinemax may reflect changes in original programming schedules that occurred during the measured period, or variances in promotions conducted by cable and satellite TV distributors.

Today, many TV networks that derive the vast majority of their income from advertising placed within traditional channels generally express confidence that online availability of programs does not pose a significant immediate threat to their core business, and in fact may help more than hinder it. In a 2007 interview with *Multichannel News*, Jeff Gaspin, NBC Universal's president of digital and cable content, said it appeared that online extensions of NBC programs elevated NBC's mainstay business. "Certainly it's something that we watch, but so far I don't see any cannibalization of the product," Gaspin told the newspaper. "In fact, I see the opposite. The chance to get in front of new eyeballs and new viewers generates traffic and interest back to the on-air broadcast. So if you heard a lot about 'Heroes' or 'Battlestar Galactica' but you were only able to catch a piece of it online, then all of a sudden it's creating a new fan base and driving people to go on air."

CONCLUSIONS AND SUMMARY

- Internet video is growing rapidly in usage and appeal, but still pales versus traditional television. While millions of people now routinely watch video over the Internet, they devote only a few minutes a day to the medium.
- The most enthusiastic users of online video are younger men, who represent the demographic category most likely to displace traditional TV viewing with online video. Even so, online consumption makes up a small percentage of total television viewing for this group.
- Research indicates the majority of online video viewing time is devoted to brief vignettes and relatively short viewing durations, with content on YouTube dominating the category.
- Fears of cannibalization may be misdirected, as online video usage generally appears to be complementary or additive to traditional television viewing and usage.
- The impact of online video availability may affect different segments of the television industry in different ways, with DVDs and physical media most threatened, and other segments less likely to experience long-term disruption.
- Overall, online video's rising popularity does not appear to have translated to a wholesale disruption in traditional television viewing habits or behaviors. Instead, online video generally has added another dimension to video usage, as millions of users sample brief programs and spend a few minutes a day watching video online, generally from PC screens. However, a widespread adoption of technologies that import online video directly to television sets could change this pattern over time.

"In the fullness of time you will see Internet protocol-based video in the living room in a big way. But you don't snap your fingers and make that happen."

Jason Kilar, CEO, Hulu.com,
from UBS Warburg Global Media and
Communications conference, December 2008

STRATEGY AND RECOMMENDATIONS

Television industry participants have opportunities to embrace Internet video delivery to advance their business interests both in traditional areas and in new-media initiatives. In particular, multichannel video distributors have unique opportunities to leverage the Internet as a new conduit that fills in pockets of presence they currently lack.

For multichannel video distributors: Understand that the adoption of online video is rising, and the medium is becoming mainstream. Adopt product line extensions and develop businesses that play to the rising interest in online video and enable customers to enjoy more convenient experiences than today's prevailing do-it-yourself models and technologies permit. Specifically:

- Consider or continue development of seamless interfaces that allow customers to select from a growing array of online video suited for TV-set display. Provide superior alternatives that deliver easy access to Internet video on the living-room TV set without the need for consumers to separately purchase a third-party device such as Apple TV or a Vudu set-top box.
- Consider creation and branding of Internet connectivity services or tiers that are optimized or specially tailored for video, featuring bandwidth and quality of service characteristics that produce excellent user experiences and may generate additive revenue by serving an emerging submarket of early online video enthusiasts.
- Develop brand-integrated online video portals that deliver video content provided by programming partners so that customers can gain access to programming through a consistent set of interfaces and branding values.
- Target early marketing efforts toward the known cohort of enthusiasts — generally younger men — who represent the market segment that may be most inclined to abandon traditional subscription video services in favor of online alternatives.
- Explore the addition of new video "tiers" that offer content from online sources and incorporate elements of video portability.

For content owners and programmers: Realize the breadth of online video usage occurring today, and play to a growing audience of adopters who generally tend to devote brief periods of time to online video sampling, or who simultaneously use online media while watching traditional television. Experiment with content accessibility both within owned or branded portals and with third-party video aggregation sites that are rising in profile and popularity. Embrace value-added socialization and interaction possibilities ranging from sharing of video clips to published user commentaries. Cultivate alliances with core video distribution partners that allow shared benefits of online exposure and/or reward customers of distribution partners with unique experiences tied to online program delivery.

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Stewart has been reporting on and writing about the cable television and media industries for more than 25 years, for publications and organizations including *Multichannel News*, *Cable World*, *CED Magazine* and Paul Kagan Associates. He has founded and served as editor of several national business magazines and is the author of the book *Fast Forward: Video on Demand* and the *Future of Television*; the editor of the book *Definitive Broadband*; and a co-author of *Broadband Planet*, published in 2004 by Cisco Press. He joined One Touch Intelligence as Senior Director of Communications Intelligence in September, 2007.

ABOUT VIDEOTRAK

VIDEOTRAK helps industry executives understand the emerging economics and dynamics of the Internet-video sector by offering exclusive analysis of distribution and content providers, business models, market statistics and consumer behaviors that are shaping the fast-growing category.

VIDEOTRAK service deliverables include: business intelligence alerts, analyst support, monthly Internet TV analysis reports, and bi-annual sector analysis reports.

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