AV&Co Video Survey Overview

AV&Co’s annual video survey explores consumers’ video viewing trends and quantifies interest in paying for video

Example Questions Explored

- What is the frequency of traditional broadcast TV viewing, and how does behavior vary by age?
- How often do consumers watch full TV episodes online, what is the trend, and how does behavior vary by age?
- How many consumers say they have “cut the cord” from traditional TV subscription services? Which consumer segments are considering video cord-cutting, and how many?
- How important is HD to the video experience? By age?
- Do consumers prefer 3D? When do they plan to buy a 3D TV?
- How many consumers view video on a mobile handset, and what is the trend?
- How much are consumers willing to pay to watch their favorite TV episode, when choices vary by:
  - Provider (cable operator, YouTube, etc.)
  - Video quality (HD, SD, low resolution)
  - Device (TV, PC, tablet, mobile handset)
  - Amount of advertising
- How does volume vary with price and ads? Hypothetically, how would a provider like Hulu optimize revenue?

Survey Background

- Web survey conducted in June, 2010—similar to survey done in June, 2009
- Conducted in partnership with Peanut Labs, an online panel provider
- 1000 respondents, drawn from a representative sample of primary video decision-makers
Broadcast TV viewing is, not surprisingly, age-related, with older segments watching more TV shows during their normal broadcast time.

How frequently do you watch TV shows during their normal broadcast time?

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Internet TV Viewing

Since last year, those viewing TV episodes on the Internet daily has doubled, with greater frequency in younger segments.

How frequently do you watch full TV broadcast episodes over the Internet?

Source: 2009 AV&Co/Telephony Survey; 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Cord Cutting by Age

This increase in online TV watching has not yet translated into cord cutting; however, a significant portion of people, especially in younger age groups, are considering it.

I have seriously considered dropping my subscription TV service because Internet video services meet most of my needs

*Percent who do not subscribe to TV service because the Internet meets most of their needs; those not interested in video are excluded from this percentage

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Those living without family are more likely to cord cut...

I have seriously considered dropping my subscription TV service because Internet video services meet most of my needs

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Cord Cutting by Age/Living Situation

...however, cord cutting is driven more by age than by household living situation

I have seriously considered dropping my subscription TV service because Internet video services meet most of my needs

Note: without family = with roommate(s) and living alone, with family = with partner only, one parent plus child(ren), and two parents plus child(ren)

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Does it bother you to watch low quality video if the same program is available in HD?

Despite Internet video viewing and potential cord cutting, younger segments prefer HD just as much as older segments.

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Good news for service providers: spending level on TV service is a more significant driver of HD preference.

Does it bother you to watch low quality video if the same program is available in HD?

- Not at all
- Only a little
- Yes, somewhat
- Yes, tremendously

Monthly Spending on TV Service

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
 Viewing on mobile-enabled handsets has grown significantly in younger segments

How frequently do you watch video on a mobile phone?

Source: 2009 AV&Co/Telephony Survey; 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Video Discrete Choice Survey: Introduction

AV&Co frequently uses discrete choice analysis in its primary research to quantify consumer interest in product features, brands, and price.

Imagine that you want to watch an episode of one of your favorite TV shows (not sports or news). The show was broadcast a couple of days ago but you missed it (and didn't record it) and now you'd like to be able to watch the show by ordering it from a service.

In the next section, we're going to show you some different options for watching the TV show episode. You will be asked to choose which option you most prefer. While many of the options do not exist today, for this part of the survey, imagine that they did. While you may not own certain devices, pretend that you do.

Each video option will differ based on the following features:

1. Provider: What company do you order the video from?
2. Device: What kind of device do you use to watch the video?
3. Quality: How good is the picture quality?
4. Ad Length: How many minutes of advertising are included with the video?
5. Cost: How much does it cost to order the video?

The next page describes these features in detail.

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Video Discrete Choice Survey: Attributes & Levels

We explored preferences for provider, device, quality level, advertising, and price

The next set of questions will ask you to make 8 choices based on the following characteristics:

**Provider:** This is the name of the company you order the video from. In the examples that follow, you will be asked about **Time Warner Cable**, Apple, Hulu, YouTube, and Netflix.

**Device:** You will have the choice of watching the video on your TV, on your PC, on your tablet (e.g. Kindle, iPad), or on your mobile handset.

**Quality:** This refers to the picture quality, not to the quality of the story line or other aspects of the content! You can watch the show in one of these formats:
- HD - High Definition video content
- Standard - comparable to typical non-HD TV service
- Low - comparable to a low resolution web video

**Ad Length:** This is the length of time of the ads you will see for every 30 minutes of the show. The examples will be: 0 minutes, 2 minutes, 4 minutes, 6 minutes, or 8 minutes

**Cost:** Your cost to order the show will be $0, $0.50, $1, $2, or $3

Please click "Next" to proceed to the questions.

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Video Discrete Choice Survey: Example Screen

Respondents were asked to make eight choices about video viewing options, including “None”

---

**Page 1 of 8:**

Imagine that you want to watch an episode of one of your favorite TV shows (not sports or news). The show was broadcast a couple of days ago but you missed it (and didn't record it) and now you'd like to be able to watch the show by ordering it from a service.

Which of the following video watching options would you most prefer? Choose the column which represents the best combination of features.

<table>
<thead>
<tr>
<th>Provider</th>
<th>YouTube</th>
<th>Apple</th>
<th>Netflix</th>
<th>None of these</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device</td>
<td>TV</td>
<td>PC</td>
<td>Mobile Handset</td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>Low</td>
<td>HD</td>
<td>Standard</td>
<td></td>
</tr>
<tr>
<td>Ad Length (per 30 minutes)</td>
<td>8 minutes</td>
<td>0 minutes</td>
<td>2 minutes</td>
<td></td>
</tr>
<tr>
<td>Cost</td>
<td>$0.50</td>
<td>$2</td>
<td>$1</td>
<td></td>
</tr>
</tbody>
</table>

Click here to open a new window that shows the configuration definitions again.

---

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
### Attribute Utilities

**Good news for video service providers: consumers prefer TV, HD, and most importantly their CableCo by wide margins**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Cost</th>
<th>Provider</th>
<th>Device</th>
<th>Quality</th>
<th>Ad Length (per 30 minutes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance</td>
<td>29.3%</td>
<td>23.6%</td>
<td>17.2%</td>
<td>16.7%</td>
<td>12.5%</td>
</tr>
<tr>
<td><strong>Importance</strong></td>
<td><strong>“Stronger” Preferences</strong></td>
<td><strong>“Weaker” Preferences</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Utility</strong></td>
<td><strong>0 minutes</strong></td>
<td><strong>2 minutes</strong></td>
<td><strong>4 minutes</strong></td>
<td><strong>6 minutes</strong></td>
<td><strong>8 minutes</strong></td>
</tr>
</tbody>
</table>

- Vertical lines represent the range of average “utility” given to each attribute by respondents.
- Distance between points on a particular line can be compared to distances between points on other lines (e.g., added utility from HD versus SD is comparable to the utility improvement of TV vs. PC).

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Provider Utilities by Age

Bad news for video service providers: CableCo preference diminishes with younger age

<table>
<thead>
<tr>
<th>Age</th>
<th>18-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility</td>
<td>CableCo</td>
<td>CableCo</td>
<td>CableCo</td>
<td>CableCo</td>
<td>CableCo</td>
</tr>
<tr>
<td></td>
<td>YouTube</td>
<td>Netflix</td>
<td>Netflix</td>
<td>Netflix</td>
<td>Netflix</td>
</tr>
<tr>
<td></td>
<td>Hulu</td>
<td>YouTube</td>
<td>YouTube</td>
<td>Hulu</td>
<td>Hulu</td>
</tr>
<tr>
<td></td>
<td>Apple</td>
<td>Apple</td>
<td>Apple</td>
<td>Apple</td>
<td>Apple</td>
</tr>
</tbody>
</table>

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
This disparity is not a result of living situation—for each living situation segment, 18-34 year olds have lower preference for the CableCo than older respondents

**Provider Utility by Household Situation and Age**

<table>
<thead>
<tr>
<th>Situation</th>
<th>Single 18-34</th>
<th>Single 35+</th>
<th>Partner/spouse only 18-34</th>
<th>Partner/spouse only 35+</th>
<th>One parent plus child(ren) 18-34</th>
<th>One parent plus child(ren) 35+</th>
<th>Two parents plus child(ren) 18-34</th>
<th>Two parents plus child(ren) 35+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 18-34</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 35+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Excluded unrelated roommates due to small N for age 35+

**Source:** 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Price and Advertising Length Optimization

In a hypothetical simulation, Hulu would see a decline in user base with an increase in price and/or increase in ad minutes.

Hypothetical Hulu Simulation – Price and Advertising Elasticity

User Base as Function of Price

User Base as Function of Ad Minutes

Hulu starting point: $0 cost and 2 minutes of ads

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Price and Advertising Length Optimization

But revenue from charging per video would likely have a greater impact than revenue collected through ads, even given industry-leading CPMs.

**Indexed Revenue as a Function of Video Price**

Indexed Revenue as a Function of Ad Minutes

**Hypothetical Hulu Simulation – Revenue Impact**

Assumptions: CPM = WSJ.com’s $75 for video-attached ads (“Online Ads are Booming if They’re Attached to Video” 11/20/2009 New York Times)

Note that Hulu actual effective CPM is likely in range of $15; $75 CPM used for “favorite” shows

Source: 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
Price and Advertising Length Optimization

For the most desirable videos (episodes of “favorite shows”), Hulu’s revenue-optimizing strategy is two minutes of ads combined with $2.50 per view

**Hypothetical Hulu Simulation – Revenue Optimization**

<table>
<thead>
<tr>
<th>Minutes of Ads</th>
<th>$0.00</th>
<th>$0.50</th>
<th>$1.00</th>
<th>$1.50</th>
<th>$2.00</th>
<th>$2.50</th>
<th>$3.00</th>
<th>$3.50</th>
<th>$4.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.00</td>
<td>1.44</td>
<td>2.46</td>
<td>3.07</td>
<td>3.37</td>
<td>3.65</td>
<td>3.43</td>
<td>3.29</td>
<td>3.09</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>2.04</td>
<td>2.83</td>
<td>3.23</td>
<td>3.52</td>
<td>maximum</td>
<td>3.75</td>
<td>3.57</td>
<td>3.44</td>
<td>3.26</td>
</tr>
<tr>
<td>6</td>
<td>1.67</td>
<td>2.48</td>
<td>2.98</td>
<td>3.23</td>
<td>3.48</td>
<td>3.69</td>
<td>3.46</td>
<td>3.32</td>
<td>3.14</td>
</tr>
<tr>
<td>8</td>
<td>1.81</td>
<td>2.33</td>
<td>2.51</td>
<td>2.65</td>
<td>2.82</td>
<td>3.39</td>
<td>2.95</td>
<td>2.86</td>
<td>2.73</td>
</tr>
<tr>
<td>10</td>
<td>1.99</td>
<td>2.26</td>
<td>2.43</td>
<td>2.66</td>
<td>2.88</td>
<td>3.22</td>
<td>2.95</td>
<td>2.90</td>
<td>2.81</td>
</tr>
</tbody>
</table>

**Assumption:** CPM of $75 (high end for “favorite” shows)

**Source:** 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis

Charging $2.50 with 2 minutes of ads would nearly quadruple revenue
Over-The-Top Video Drivers

Technology, Content Availability and a clear Value Proposition are the three drivers of OTT video adoption

**OTT Success Factors**

1. **Technology Evolution**
   - Critical mass of consumers with...
     - ...affordable high-speed broadband connections (wired and wireless)
     - ...internet-connected devices (TVs, mobile handsets, tablets)

2. **Content Availability**
   - Current season primetime TV shows
   - Sports, News and Live-Events
   - Recent movies
   - Large back-catalog of movies and past season programming

3. **Value Proposition**
   - Consumers optimize or reduce video spending
   - Content owners are made whole
## TVs Connected to the Internet

A wide variety of options are coming into play for connecting TVs to the internet.

### STB / DVR

<table>
<thead>
<tr>
<th>82M</th>
<th>IP-enabled installed base by 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roku XD</strong></td>
<td>1080p video quality</td>
</tr>
<tr>
<td></td>
<td>Access to several VOD stores</td>
</tr>
</tbody>
</table>

### Blu-Ray Players

<table>
<thead>
<tr>
<th>89M</th>
<th>IP-enabled installed base by 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LG BD 390</strong></td>
<td>Plays BR/DVD discs and can wirelessly access internet content and push to TV</td>
</tr>
<tr>
<td><strong>NetCast allows access to:</strong></td>
<td></td>
</tr>
<tr>
<td><a href="#">Amazon</a></td>
<td></td>
</tr>
<tr>
<td><a href="#">Netflix</a></td>
<td></td>
</tr>
<tr>
<td><a href="#">Hulu Plus</a></td>
<td></td>
</tr>
</tbody>
</table>

### Game Consoles

<table>
<thead>
<tr>
<th>89M</th>
<th>IP-enabled installed base by 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Playstation 3</strong></td>
<td>Combines video game capabilities with hard drive, Wi-Fi connectivity and media center OS</td>
</tr>
<tr>
<td><strong>Blu-Ray player, 7.1 Dolby sound, movies via PS-Store</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PS3, Xbox and Wii allow access to:</strong></td>
<td></td>
</tr>
<tr>
<td><a href="#">Amazon</a></td>
<td></td>
</tr>
<tr>
<td><a href="#">Netflix</a></td>
<td></td>
</tr>
<tr>
<td><a href="#">Hulu Plus</a></td>
<td></td>
</tr>
</tbody>
</table>

### IE Televisions

<table>
<thead>
<tr>
<th>107M</th>
<th>IP-enabled installed base by 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Samsung UNB8500</strong></td>
<td>Integrated wireless internet connectivity</td>
</tr>
<tr>
<td></td>
<td>DLNA-compatible to allow streaming from networked devices</td>
</tr>
<tr>
<td><strong>Media 2.0 gives access to Amazon VOD, YouTube</strong></td>
<td></td>
</tr>
</tbody>
</table>

---

Sources: Strategy Analytics “Connected CE Devices US” 2010,
TV Show Release Windows

Over the top release windows/monetization strategies are paralleling traditional TV release windows

1st Year

Live 2nd Day 2nd Week 3rd Week 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th month

Live and ON-Demand

HBO USA CBS

DVD Sale and Rental

redbox Netflix

Off-Network Syndication

tbs TNT TCA Lifetime Bravo ABC

Extended Release Window

DVD Sale and Rental

Digital Sales and Rental (A La Carte)

iTunes Amazon

Digital Subscription

huluPLUS Netflix

2nd Year 3rd Year 4th Year

Sources: AV&Co. Research

- Sept 2010 – Multi-year deal between Netflix and NBC for Netflix to offer previous season popular TV shows

Confidential – Do Not Reproduce
Erosion of Content Walls

Content availability and advertising platforms will both continue to improve with viewership

Erosion Dynamics

OTT providers “overbid” for marginal video content

Content owners allow more content OTT

More subscribers choose OTT for more of their viewing hours

More advertisers are attracted to OTT platforms

OTT ad platform effectiveness improves

OTT ad platform pricing improves

Content

Advertising

Netflix Strategy

“We continue to invest aggressively in streaming” – Reed Hastings, CEO, Netflix

As streaming behavior substitutes for DVDs, Netflix strategy is to invest savings on postage in content deals

Disney Strategy

“You will continue to see Disney on new platforms with models that basically rely either on advertising, on electronic sell-through, electronic rentals, and in the future PPV, Pay-per-app, or a subscription model... We do not believe that the status quo is the business model that we want to pursue and we want to be out there with our content offerings” – Jay Rasulo, CFO, Disney
Ultimately, what people want is a great user experience that delivers a wide variety of video content available any time, any where, and smoothly transitions between devices for free, or as inexpensively as possible.

Yes, advanced functionality and an improved user experience...

But equally important is low price.

**Importance of Attributes in AV&Co. Video Study**

- Cost: 29.3%
- Provider: 23.6%
- Device: 17.2%
- Quality: 16.7%
- Ad Length: 12.5%

The relative importance or attribute utilities were the result of a conjoint analysis conducted by AV&Co. The importance is to be understood relative to each other.

Source: 2009 AV&Co/Telephony Survey; 2010 AV&Co/Peanut Labs Survey; AV&Co Analysis
**Consumer Economics**

Consumers are looking to reduce spending; tech savvy consumers can already realize significant savings and continue to enjoy much of the content they are used to.

---

**Total Video ARPU under different OTT adoption scenarios**

- **Premium Cable Subscriber**
  - Comcast Preferred Plus (160 cable ch)
  - $10 VOD
  - $115

- **Complementary User**
  - (“Cord-Shaver”)
  - Comcast Digital Starter (80 cable ch)
  - Content lost: HBO, Showtime, Cinemax, The Movie Channel, ~10 sports channels, Other niche content
  - -28%
  - $83

- **Substitute User**
  - (“Cord-Cutter”)
  - ATSC antenna (access to ~18 OTA channels incl HD)
  - IP-enabled TV or STB/device
  - Content lost: ESPN, CNN, CNBC, Fox News, The Weather Channel, Nickelodeon
  - -70%
  - $35

---

Sources: Comcast website (prices for Boston)
Cable MSO Economics

A large share of Pay-TV revenues is captured by MSOs as margin – consumers can realize big savings while continuing to pay similar fees to content owners.

Cable ARPU breakdown

Source: SNL Kagan, Nielsen, The Diffusion Group, AV&Co. Analysis
### Mobile Video: Usage by Platform

Mobile devices are already a significant source of video viewing worldwide.

<table>
<thead>
<tr>
<th>Device Type</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV via traditional sources</td>
<td>92%</td>
</tr>
<tr>
<td>Desktop computer</td>
<td>75%</td>
</tr>
<tr>
<td>Laptop computer</td>
<td>72%</td>
</tr>
<tr>
<td>DVD/Blu-ray</td>
<td>71%</td>
</tr>
<tr>
<td>TV via broadband or internet</td>
<td>63%</td>
</tr>
<tr>
<td>Mobile phone/device</td>
<td>63%</td>
</tr>
<tr>
<td>iPad/tablet</td>
<td>21%</td>
</tr>
</tbody>
</table>

*Note: Australia, Brazil, Germany, Italy, Spain, the UK and the US. Source: Accenture, "Consumers of all ages are going over-the-top" conducted by Opinion Research Corporation, April 11, 2011.*
Mobile video viewers are currently growing at 40%+ annually, with usage also increasing.
Mobile Video: Advertising Opportunity

Advertisers view mobile devices as attractive platforms for future video advertising

Online Video Ad Platforms for Which Advertisers/Agencies in North America Would Like to Increase Their Budget, March 2011

% of respondents

<table>
<thead>
<tr>
<th>Platform</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile phones</td>
<td>69.5%</td>
</tr>
<tr>
<td>iPad/tablets</td>
<td>65.7%</td>
</tr>
<tr>
<td>IPTV/connected TV</td>
<td>19.7%</td>
</tr>
<tr>
<td>All of the above</td>
<td>7.7%</td>
</tr>
<tr>
<td>None of the above</td>
<td>11.6%</td>
</tr>
</tbody>
</table>

Note: n=233