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PAPER

The War Between OTT and Pay-TV: Best Practices for Pay-TV Providers to Win the War Through Personalized Experiences



Introduction

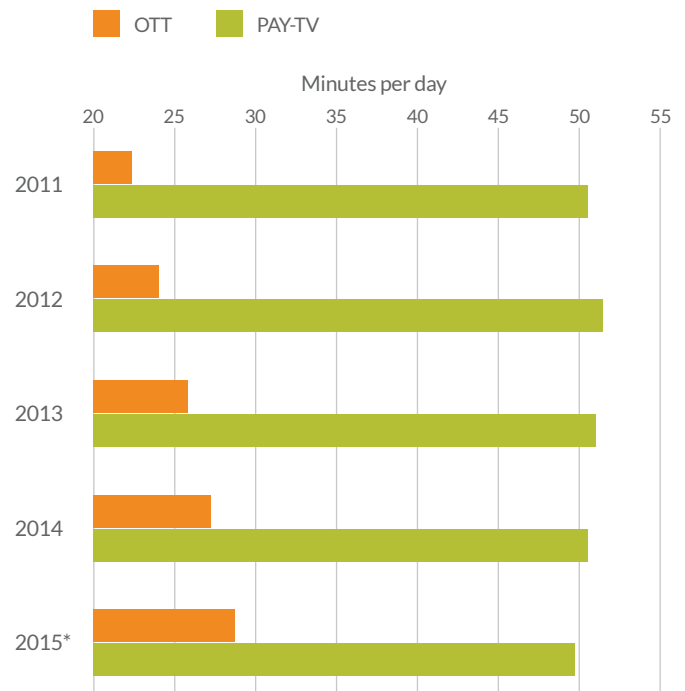
The video industry continues to see a shift in the amount of time consumers watch their traditional pay-TV service, as more content is being viewed on over-the-top (OTT) services such as Netflix, Hulu and others. Pay-TV providers must focus not only on why consumers are gravitating to these OTT offerings, but also on how these providers can slow and ultimately reverse the trend.

The average Netflix subscriber watches content for 1 hour and 33 minutes per day¹, while the average pay-TV subscriber watches a little over 2 hours and 30 minutes of content each day⁴. However, a trend TiVo continues to observe is that the amount of time spent watching content is increasing for Netflix, while it is actually decreasing for pay-TV. Additionally, 92% of Netflix subscribers are satisfied with Netflix's service⁵, while 76% of pay-TV subscribers are satisfied with their provider's service.⁶

TiVo, the leader in entertainment technology innovations and insights, has strong theories on what is causing this phenomenon and how these trends can be halted or, better yet, reversed. One key area pay-TV providers need to address is content discovery. TiVo researches trends related to these topics and reports on them quarterly. TiVo's Q3 2015 Video Trends Report analyzed the survey responses from over 3,150 consumers, which included several questions on whether respondents feel it is easy to find something to watch on OTT services, as well as on their pay-TV services. Here is a breakdown of how respondents, who are also pay-TV subscribers, feel about the content discovery experience, ranked in order:

1. Subscription OTT services offer the best experience, with 78.2% of respondents saying these services make it easy to find something to watch.
2. Paid video-on-demand (PVOD) catalogs of pay-TV providers came in second, with 66.0% of respondents stating they find the discovery experience easy.
3. Linear TV falls into third, with 58.2% of respondents answering it is easy to find something to watch on their pay-TV service.

Figure 1: Daily Watch Time on OTT vs. Pay-TV



Source: eMarketer
*Estimate

Data is the Foundation

What is Netflix doing that is resulting in both an increase in the time spent watching the service, as well as overall subscriber growth? Netflix is investing an incredible amount of time and money into understanding its subscriber base, down to the individual profiles created within accounts. The wealth of data Netflix captures and analyzes benefits the company tremendously. First and most importantly, with data, Netflix can deliver its subscribers a series of personalized content recommendations, resulting in what Netflix estimates drives 75% of views. Secondly, data can help with content acquisition decisions¹².

Pay-TV providers have years of data similar to what Netflix is capturing, but the wealth of data seems to exist in a diverse number of silos, rather than being integrated, and it's often difficult to access. Until pay-TV providers identify and deploy data-driven, personalized content recommendations, the market will likely see Netflix viewing continue to climb while cord-cutting and cord-cheating continue to increase.

What amount of data does Netflix leverage? Netflix is processing over 400 billion interactions daily, managing 8 million events and 17 GB per second during peak times³. Below is a breakdown of the data Netflix captures for its 40+ million domestic subscribers and 65+ million global subscribers⁸.

- Pause, rewind and fast forward
- The day of the week on which content is viewed (Netflix has found people tend to watch TV shows during the week and movies during the weekend.)
- The date on which content is viewed
- The time when content is viewed
- The location where content is viewed (i.e., zip code)
- The device on which content is viewed (Does the viewer use a tablet for TV shows and Roku for movies? Does the viewer access the Kids section more on an iPad, etc.?)
- The duration after which a viewer pauses and leaves content (and if he/she ever comes back)
- Ratings (about 4 million per day)
- Searches (about 3 million per day)
- Browsing and scrolling behavior
- Data within movies

On the last point (data within movies), Netflix collects and analyzes data for subscribers' movie-viewing behaviors. For example, Netflix takes various "screen shots" to look at "in the moment" characteristics. Some have figured these characteristics may be the volume, colors and scenery that help Netflix determine what its subscribers like.

It has been reported from numerous sources that Netflix's data collection efforts cost roughly \$150 million annually¹¹. This investment includes the efforts of hundreds of employees who are tasked with enhancing the metadata of content, which are then leveraged in Netflix's personalized recommendations functionality. Based on a few educated assumptions, TiVo estimates Netflix is investing over 20 times more than the average pay-TV provider to deliver personalized recommendations. Even more shocking is the percentage of average revenue per user (ARPU) that is reinvested toward personalized recommendations. Below is a comparison TiVo created to illustrate the investment in recommendations by Netflix and pay-TV Providers.

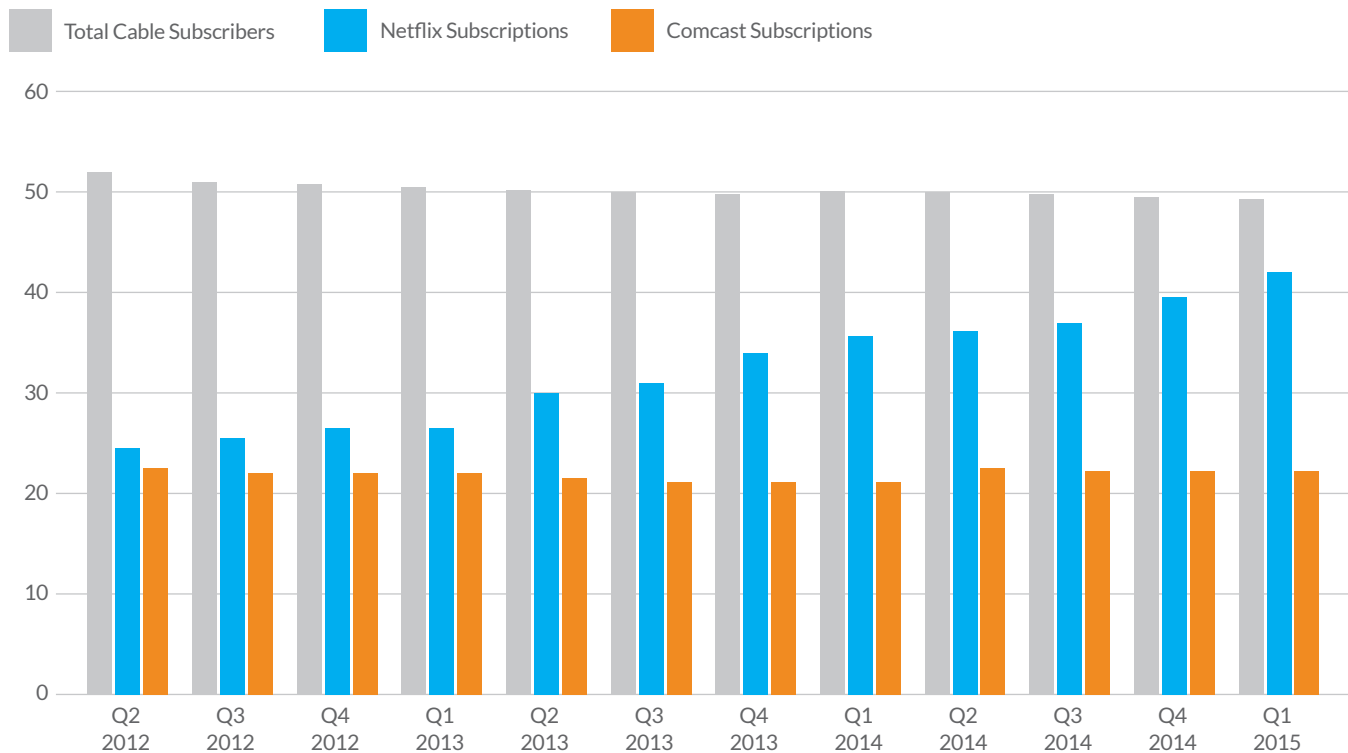
Figure 2: Dollars Spent on Content Recommendations by Netflix vs. Pay-TV Provider

	Netflix Streaming	Typical Pay-TV Provider
ARPU	\$11	\$100
Global Subscribers	65M	10M
Recommendations Budget	\$150M	\$10M
Amount per Subscription Invested in Recommendations Annually	\$2.30	\$1.00
Amount per Month	\$0.19	\$0.08
Percentage of Monthly ARPU	2.0%	0.09%

Now, take this analysis one step further and compare Netflix’s annual revenue to some of the top U.S. pay-TV providers. Netflix has annual revenues of approximately \$5.5 billion, while Charter has almost double the annual revenues at \$9.11 billion, and DIRECTV has annual revenues of \$33.3 billion. When the recommendations budget is put into the perspective of revenue, why are pay-TV providers not investing even more in content discovery, overall UI/UX experiences and data to power these next-generation viewing experiences?

With substantial growth combined with very little churn, Netflix is obviously onto something. See the chart below to better understand Netflix’s subscriber growth compared to cable and Comcast. Can pay-TV providers really compete with these OTT services? Do pay-TV providers have the content, data and resources to offer an experience equal or superior to that of Netflix? The answer is “yes,” and let’s look at some of the differentiators the pay-TV providers have that should help them win the war of eyeballs.

Figure 3: Netflix Subscriber vs. Cable Subscribers



Key Differentiators and Best Practices for Pay-TV Providers

Content Will Always Be King

While Netflix has a large library of movies and television series, the pay-TV provider has content that is significantly greater in value, including linear TV, live TV, sports, video on demand (VOD), premium channels and pay-per-view.

Figure 2: Dollars Spent on Content Recommendations by Netflix vs. Pay-TV Provider

	Netflix	Pay-TV
Linear Content	✗	✓
Live Sports Content	✗	✓
Live Content	✗	✓
PVOD Content	✗	✓
VOD Content (Free On-Demand Movies)	✓	✓
Episodic On-Demand Content	✓	✓
Pay-Per-View Content	✗	✓
Premium Channels/Packages	✗	✓

Netflix Versus Pay-TV Content Reach

According to scheduling data, in an average week, a traditional pay-TV provider has over 26,000 pieces of content available on linear TV, over 450 sporting events (a vast majority are live) as well as awards shows and concerts. News shows are also some of the biggest contributors to these numbers. Additionally, pay-TV providers can feature the availability of 13,515 pieces of free VOD content (10,290 are episodic and 3,225 are movies), 1,551 pieces of PVOD content (including pay-per-view events) and 11,964 free TV offerings (primarily episodic). Of the paid TV offerings, the median price is \$5.99, and the average price is \$7.51. In comparison, Netflix has roughly 4,000 movies, 35,000 episodes from 950 TV series and 500 stand-alone programs.

What is interesting to observe is that pay-TV service delivers significantly greater amounts of choices to the viewer, yet continues to lose ground to Netflix. Leveraging personalized recommendations, paired with the larger-than-Netflix content library, pay-TV providers need to utilize their data to promote unseen, but relevant content to their subscribers.

Increasing Views and Engagement With Data

Once pay-TV providers appreciate the importance of the data, largely unavailable to Netflix, it's important to then understand how to utilize the data to increase subscriber viewing and engagement.

While some pay-TV providers have transitioned away from the EPG grid in their TV Everywhere offerings, the grid largely remains. However, as a result of outside factors such as gaming devices, iTunes service, other music services, etc., consumers are becoming accustomed to more personalized navigation schemes. On these services, content grouped by consumers' interests, genres or other logical categories is now typically delivered in carousels, or collections. The grid, if it hasn't been enhanced with these types of ways to browse content, can be frustrating for the subscriber.

When the carousel concept was introduced years ago by services such as iTunes, most carousels had to be manually created by an editorial team, and every user saw the same content. Today, these services are leveraging data to power algorithms and machine learning, thereby enabling carousels to be dynamic and personalized. With this approach, a pay-TV provider can create an infinite number of carousels. Now, the content finds the viewer. TiVo recommends that pay-TV providers leverage their wealth of data to take this carousel feature a step further – by introducing predictions of what subscribers will want to watch next. Netflix currently offers recommendations for what its subscribers may want to watch. However, because pay-TV providers have a magnitude of fresh episodic series, catch-up TV, and first-run content plus the power of viewer behavioral data, pay-TV providers' content predictions can ensure their subscribers do not miss tonight's *Dancing with the Stars* show, a favorite sporting event or that latest *Modern Family* episode.

Below is a list of other popular carousels (any blend of these can be made available) pay-TV providers can offer that Netflix cannot, as well as best practices on how to leverage carousels.

1. Linear Content

While many of the more popular TV shows have older seasons on Netflix, only the pay-TV provider currently has all the recent episodes, and in many cases the ability to offer older episodes on-demand. While Netflix is developing original content, its current business model of \$11 a month per subscriber could never support acquiring the additional content that the pay-TV provider has licensed. Therefore, TiVo suggests pay-TV providers should offer a "What's On Now" carousel – populated with time of day, viewing habits and schedule data. This should be the first carousel that a pay-TV provider offers to entice viewers.

On Now Just For You



2. Sports Content

Sports content is a competitive advantage for pay-TV providers over Netflix as well as most OTT offerings available today. While pay-TV providers have sports programming, providers are limiting the potential of this major competitive advantage over OTT offerings by not leveraging the wealth of data on subscribers' viewing habits of this content: favorite teams, favorite sporting events, etc. In addition to utilizing viewing habits, pay-TV providers should also be leveraging the wealth of data about these sporting events, such as starting players, current scores and current inning, quarter or period, in order to further entice sports fanatics.

By leveraging personalized data, pay-TV providers can ensure that sports fans know when their favorite team or sport is on TV, which game is most exciting, and related scores and statistics. Also equally important, pay-TV providers could choose not to promote this particular carousel to non-sports fans, in order to avoid annoying those viewers.

3. Live Content

A major competitive advantage for pay-TV providers is that they have more live content available for subscribers than any other service. However, pay-TV providers need to utilize subscribers' viewing history and habits, social data and scheduling data for the purpose of powering recommendations or carousels to ensure that the right audience knows about the live content that would interest them. Examples include a presidential debate that is scheduled to air that week, or an upcoming awards show that will air that night, or even a talk show that might interest a subset of the provider's subscriber base. Many of these events are annual or even years apart, but by preserving a viewer's history pay-TV providers can ensure that the event is recommended the next year (or at the next appropriate time interval).

Additionally, pay-TV providers can leverage the data to create a carousel for future live events that not only builds awareness with the subscriber, but also allows the viewer to set his/her TiVo device or other DVR.



4. VOD Content

Pay-TV providers typically receive new releases of movies earlier than Netflix. Again, based on viewership data, pay-TV providers have the ability to increase ARPU through tailored promotions, at the right time, to their subscribers matching the appropriate demographics. For example, if a pay-TV provider knows that there are many households who watch a considerable amount of the TV series *SpongeBob SquarePants* and spend more time viewing this content than the average household, the provider should promote the *SpongeBob SquarePants* movie to this subset of subscribers.

Another best practice that TiVo recommends is to leverage data to promote content at a particular time of day versus 24/7. When a pay-TV provider has the ability to leverage data to understand what content is viewed at a particular time of day, they are then able to deliver a targeted content promotion to the right person, at the right time. For example, a pay-TV provider's data show a household watches family titles from its PVID catalog on Sundays between 3 p.m. and 7 p.m. This data trend helps the pay-TV provider identify the best time to promote this type of content to this particular audience for optimal conversions. If 1% of a pay-TV provider's subscriber base (of 10 million subscribers) acted on this promotion, it would result in roughly \$400,000 in additional revenue (based on the VOD title priced at \$4).

On Demand For You



5. Pay-Per-View

PPV events tend to draw interest from unique categories, such as Boxing, Mixed Martial Arts (MMA) and Professional Wrestling. Since certain TV shows are very specific to these types of PPV events (e.g., *The Ultimate Fighter*, *Monday Night Raw*), by leveraging its viewership data, a pay-TV provider can easily promote specific PPV events to the subscribers who have watched TV shows on a related topic.

6. Up-Sell/Cross-Sell

Rather than sending direct mail and promoting content through the grid, which do not differentiate among demographic groups, pay-TV providers may be better served by leveraging data such as viewing history to promote packages that the subscriber does not currently have. For example, if a subscriber watches a considerable amount of college basketball, the pay-TV provider should promote its college basketball premium packages or regional sports offerings. Also, pay-TV providers could leverage viewership data to up-sell a subscriber to a relevant, higher tiered package. For example, a pay-TV provider could promote the show *Dual Survivor*, which airs on the Discovery Channel, to those subscribers who watch *Survivor* but do not have access to the Discovery Channel in their current package.

The Power of Personalization

Once the pay-TV provider better understands its subscribers' viewing habits (e.g., through machine learning), then the provider can create carousels that are based on subscribers' interests. For example, the pay-TV provider can create "Cooking," "Home Improvement" or "Because You Watched" carousels. These carousels should be personalized, so that Subscriber A sees different content selections than Subscriber B sees in a particular, same-titled carousel. Additionally, pay-TV providers can leverage subscribers' recorded content, as well as previously viewed VOD titles, into these recommendations.

This capability has incredible potential to educate subscribers about new content, or content of which they were not previously aware. This is how pay-TV providers move a subscriber from watching an average of five channels to watching an average of 10-15 (or even more) channels. By increasing the number of channels a subscriber watches, a pay-TV provider can also fend off new offerings such as skinny packages.

TiVo recently conducted a multivariate A/B test for a large pay-TV provider, which consisted of two unique "Watch Now" carousels populated with 10 recommended titles each. The first carousel was populated by leveraging the subscribers' favorite series (implicitly derived), favorite team/sports, day-parted recommendations and overall content popularity. The second carousel was populated solely by the most popular content. The subscribers who received the personalized carousel found something to watch 62% of the time, without leaving the carousel (i.e., without scrolling down or performing a search). On the other hand, the subscribers who received the carousel of the most popular titles found something to watch only 25% of the time.

Another example is of a pay-TV customer who leveraged TiVo's Seamless Discovery® platform to power numerous carousels in its UI, some manually curated and others dynamically driven by personalized recommendations. Over a six-week period, the carousels powered by Seamless Discovery's personalized recommendations received click-through rates over 3 times higher than the manually curated carousels. These results are especially significant since the carousels containing personalized recommendations were positioned lower on the screen, specifically below the fold, whereas the manually curated carousels were above the fold.



Personally recommended carousels outperform manually curated carousels with 3 times the click-through rate.

Conclusions

While the average time spent watching television has dropped 4% in the last three years, the average viewing on Netflix has grown 17% over that same period¹⁰. This does not take into consideration other competitive video options such as Hulu, YouTube and other streaming services. Pay-TV providers need to create integrated marketing programs that better distinguish their offerings from those of Netflix. The fight for eyeballs is stronger now than ever, and pay-TV providers can take lessons from Netflix – but TiVo strongly believes the student can become the teacher.

In addition, unlike the case with Netflix's content, pay-TV providers can take advantage of the interactive features of their programming. For instance, viewers can cast votes on awards shows or reality/contest shows (e.g., *Dancing with the Stars*, *American Idol*, etc.) and can send tweets or Facebook updates of what they are watching while the show is airing and relevant. This functionality provides another competitive advantage for pay-TV providers and can lead to more engaged viewers.

TiVo works with many of the world's largest pay-TV providers who are laying the foundation for next-generation user experiences. However, at the current deployment pace, can pay-TV providers surpass or even catch up with Netflix? TiVo is not totally naive to the fact that pay-TV providers have many hurdles to overcome in their attempts to deliver an experience similar to that of Netflix. However, if these efforts are not accelerated, pay-TV providers could find themselves facing dramatic increases in churn rates, or at the very least, lower ARPU as a result of subscribers' potentially downgrading to lower-priced packages.

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(5) <http://www.cutcabletoday.com/netflix-pay-tv-survey/#sthash.M7iOmoZb.dpuf>

(6) Digitalsmiths Q3 2105 Video Trends Report: Consumer Behavior Across Pay-TV, VOD, PPV, OTT, Connected Devices, and Content Discovery

(7) <http://qz.com/384618/netflix-subscribers-streamed-10-billion-hours-last-quarter>

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ABOUT TIVO

TiVo Corporation (NASDAQ: TIVO) is a global leader in entertainment technology and audience insights. From the interactive program guide to the DVR, TiVo delivers innovative products and licensable technologies that revolutionize how people find content across a changing media landscape. TiVo enables the world's leading media and entertainment providers to deliver the ultimate entertainment experience. Explore the next generation of entertainment at tivo.com, forward.tivo.com or follow us on Twitter @tivo or @tivoforbusiness.



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