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INTERTRUST WHITE PAPER

# How to Revive the Pay TV Market

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# Introduction

The pay TV industry can be seen in many regards as a global phenomenon due to the sheer size of its infrastructure and the millions of households it reaches around the world. Globally, the pay TV subscription revenue is forecast to inch upward from $215 billion in 2017 to $221 billion in 2018[1]. However, as broadband quality has increased, and connected devices have proliferated, including smart TVs and smartphones, new OTT competition and direct-to-consumer content is reaching more audiences. In addition, telcos have an increased presence in pay TV market leveraging their competing network infrastructure and existing relationships for bundle offers.

Of particular concern in the U.S. and Europe are declining ARPUs, low demand from Millennials, and high churn rates. Globally, the low ARPU markets are growing but do not produce enough revenue to sustain the industry. The high ARPU markets are seeing the most subscriber losses but have opportunities to increase revenue by minimizing overhead, investing in targeted advertising and a diversification of services, and lowering piracy.

Competition in the pay TV industry has increased between cable and satellite companies, telcos and OTT service providers. The largest pay TV providers in the U.S. lost 405,000 net video subscribers in Q3 2017 compared to a loss of 250,000 subscribers in Q3 2016. The biggest losses were seen across the top six cable companies with a loss of 290,000 subscribers in the most recent quarter compared to a loss of 90,000 subscribers in the same quarter the previous year. Some of the more staggering losses came from satellite TV services, which lost 475,000 subscribers in Q3 2017 compared to a 5,000 subscriber gain the previous year. Not surprisingly, the internet-delivered services provided by Sling TV and DIRECTV added over half a million subscribers, up almost 250% from the previous year[2] and helping to offset the loss of satellite subscribers.

While many factors contribute to subscriber loss, there are steps that pay-TV providers can take to protect their revenue streams. Media companies need to support multi-screen TV to meet subscriber expectations. With multi-screen TV comes new revenue opportunities through targeted advertising. Pay TV providers can benefit from user data despite ongoing policy changes. With the proper governance framework, data can be monetized, increasing the value of TV inventory. We are in the early stages of programmatic advertising with most TV ad placement being done manually. However, many are recognizing the potential in automating the buying and selling process with targeted TV ad spend growing by a 65.8 percent increase in targeted TV ad to reach $1.26 billion in 2017 and set to grow to $4 billion by 2019[3].

Additionally, piracy is on the rise most prominently in Latin America and Asia Pacific. Overall revenue loss is estimated at $7 billion, making anti-piracy an important investment[4]. Meanwhile, although DRM is technology designed for piracy, the infrastructure is expensive. According to Frost & Sullivan, the costs are between $100,000 to $250,000 to port a secure player to a new platform with services supported on 10-12 devices with various browsers or apps on an additional 40 devices – and this number continues to grow. Therefore, the upfront development costs and R&D investment for DRM can create costly and complex overhead.

We cover these key concepts in our white paper with an emphasis on how to revive pay TV subscriber margins.

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[1] https://www.statista.com/statistics/307297/global-tv-subscription-revenue/
[2] http://www.leichtmanresearch.com/press/111517release.html
[3] http://www.adweek.com/tv-video/targeted-tv-ad-spend-will-reach-1-26-billion-this-year-up-66/#/
[4] http://www.ctameurope.com/wp-content/uploads/2017/10/CLICK-HERE-TO-DOWNLOAD-NAGRA-REPORT.pdf

## Innovation is key as pay TV losses accelerate:

Globally, cable and satellite TV subscription revenue is forecast to inch upward from $215 billion in 2017 to $221 billion in 2018[5]. However, as broadband quality has increased, and connected devices have proliferated, including smart TVs and smartphones, new OTT competition and direct-to-consumer content is reaching more audiences.

Of particular concern in the U.S. and Europe are declining ARPUs, low demand from Millennials, and high churn rates. The largest pay-TV providers in the U.S. lost 405,000 net video subscribers in Q3 2017 compared to a loss of 250,000 subscribers in Q3 2016. The biggest losses were seen across the top six cable companies with a loss of 290,000 subscribers in the most recent quarter compared to a loss of 90,000 subscribers in the same quarter the previous year. Globally, low ARPU markets are growing but do not produce enough revenue to sustain the industry.

Innovation is key, with some companies able to stave off subscriber losses by converting them to cord-cutting services. For instance, AT&T reported a loss of 390,000 total subscribers with 300,000 converting to its satellite and U-verse services to DirecTV Now, a cheaper option for streaming television over the internet[6]. Meanwhile, Comcast reported a loss of 125,000 total video customers during Q3 2017, up from 34,000 in losses during the Q2 period. Despite this decline, Comcast was able to compensate with a 5.1% YoY increase in cable communications revenue to $13.2 billion driven by high-speed Internet, video and abusiness services. In fact, business services rose 12.6% over Q3 2016.

| Pay-TV Providers | Subscribers at End of 3Q 2017 | Net Adds in 3Q 2017 |
|---|---|---|
| **Cable Companies** | | |
| Comcast | 22,390,000 | (126,000) |
| Charter | 16,982,000 | (89,000) |
| Altice | 3,430,200 | (32,500) |
| Mediacom | 823,000 | (6,000) |
| Cable ONE | 287,260 | (10,730) |
| Other major private company | 4,220,000 | (25,000) |
| **Total Top Cable** | **48,132,460** | **(289,230)** |
| **Satellite Services (DBS)** | | |
| DIRECTV | 20,605,000 | (251,000) |
| DISH-DBS | 11,668,000 | (224,000) |
| **Total DBS** | **32,273,000** | **(475,000)** |
| **Phone Companies** | | |
| Verizon FIOS | 4,648,000 | (18,000) |
| AT&T U-verse | 3,718,000 | (135,000) |
| Frontier | 981,000 | (26,000) |
| **Total Top Phone** | **9,347,000** | **(179,000)** |
| **Internet-Delivered** | | |
| Sling TV | 1,680,000 | 240,000 |
| DIRECTV NOW | 787,000 | 296,000 |
| **Total Top Internet-Delivered** | **2,467,000** | **536,000** |
| **Total Top Providers** | **92,219,460** | **(407,230)** |

*Source: http://www.leichtmanresearch.com/press/111517release.html*

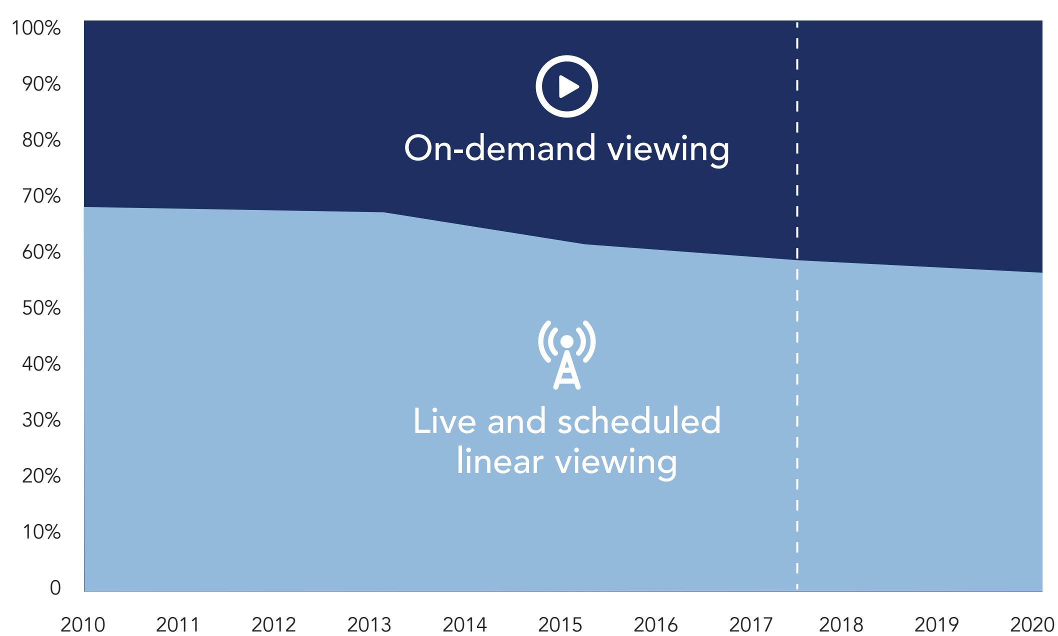
[5] https://www.statista.com/statistics/307297/global-tv-subscription-revenue/
[6] https://www.reuters.com/article/us-at-t-subscribers/att-subscriber-losses-highlight-cord-cutting-threat-analysts-idUSKBN1CH26T

## Embracing the inevitable: Multi-screen TV

The squeeze from SVOD original content and $10 or under subscription fees has forced pay TV providers to embrace multi-screen TV options. Sky in the UK was one of the first to prevent cannibalization of their main services by offering Now TV, which targeted customers without a pay TV service with limited live TV streaming. Over the last five years, Sky saw only 2% of Sky TV customers joining Now TV, proving the investment successful[7]. Pay TV providers in the United States were slower to embrace the OTT trend, although following the acquisition of DirecTV, AT&T launched DirectNow, an option for cord cutters priced at $60 a month for 100 channels. Comcast also announced a skinny bundle in September of 2017 with Xfinity Instant TV, aimed at "cord nevers" which offers an $18 bundle of local broadcast networks, video-on-demand and DVR. To gain access to other channels from Comcast, subscribers will have to upgrade another $30, putting it in competition with Sling TV's $20 package which also gives access to ESPN.

As the ultimate live experience, sports is a driving force behind a subscriber's choice between cable TV and OTT. Every time a household cancels cable service, ESPN loses about $8 a month[8]. As streaming video has continued to rise, ESPN has seen a decline from 100 million households in 2011 to 87 million households in 2017. Which is why it's not surprising the Walt Disney Co. is offering an over-the-top video streaming edition for ESPN fans at $4.99 per month for the app – although notably it will not include North American football.

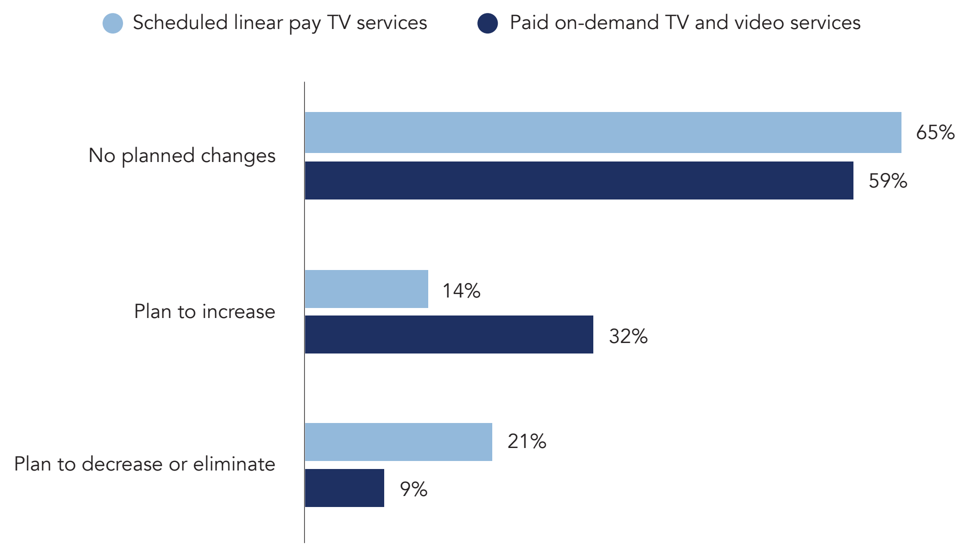
**On-demand vs. live and scheduled linear share of active viewing hours, with prediction for 2020**




*Source: Ericsson ConsumerLab*

[7] http://www.ctameurope.com/wp-content/uploads/2017/10/CLICK-HERE-TO-DOWNLOAD-NAGRA-REPORT.pdf
[8] https://www.statista.com/statistics/307297/global-tv-subscription-revenue/

**Plans to change spending from scheduled linear TV and paid on-demand TV and video in the next 6-12 months**




*Source: Ericsson ConsumerLab*

According to Nielson, more than 50% of U.S. households use some type of OTT service and 89.5% of OTT streaming is done on TV screens as opposed to smartphones or laptops[9]. In addition, ratings for "*House of Cards*" and "*Orange is the New Black*" are comparable to popular series on HBO and Showtime. Meanwhile, Nielson also points out that while VIP-add source sent via email original programming may be what drives subscription revenue and renewals, 80% of viewing time is spent on the traditional TV back catalog. The fact that OTT and traditional TV is symbiotic for viewers proves there is room for pay TV providers to become involved in SVOD opportunities.

[9] https://www.thevideoink.com/2017/10/23/nielsen-data-says-89-ott-viewing-takes-place-tv-sets/

## The future is addressable media and proper targeting

Ad fatigue contributes to OTT adoption with 41% of households in the U.K. saying part of their motivation for watching on-demand services is to reduce the number of advertisements compared to traditional television. Targeted advertising is a unique opportunity to deliver ads more relevant to the audience.

Addressable media and proper targeting is no longer a theory. If pay TV providers are going to meet revenue expectations, they will have to compete with digital by properly monetizing audiences. Digital ad spend will see double-digit growth and has surpassed TV for the first time with a spend gap nearing $10 billion. Mobile will dominate digital ad spend at 70% and is predicted to surpass TV as a standalone category by 2019. Ideally, advertisers experience the same brand recall from TV combined with the audience-based targeting advertisers use in digital. By combining the best qualities of television with the addressability of digital, advertisers could have targeted, dynamic video ads in TV-quality streaming environments.

We are in the early stages of programmatic advertising with most TV ad placement being done manually. However, many are recognizing the potential in automating the buying and selling process with a 65.8 percent increase in targeted TV ad spend, reaching $1.26 billion in 2017 and set to grow to $4 billion by 2019[10]. Programmatic TV buying is expected to grow 600% from 2016 to 2018[11].

The 600% growth in programmatic demonstrates how imperative it is to provide an opportunity for addressable advertising at scale. By serving commercials tailored to audiences instead of programs, advertisers can reach desired households regardless of what is being watched, and when it's watched. This reality of better targeting on television will help stem the tide and change the direction of advertising dollars.

Data and analytics play a crucial role for content providers who are looking for ways to separate themselves with expectations of this market doubling from $1.8 billion globally in 2017 to $3.7 billion globally in 2022[12].

## Piracy on the rise with $7 billion in pay TV loss

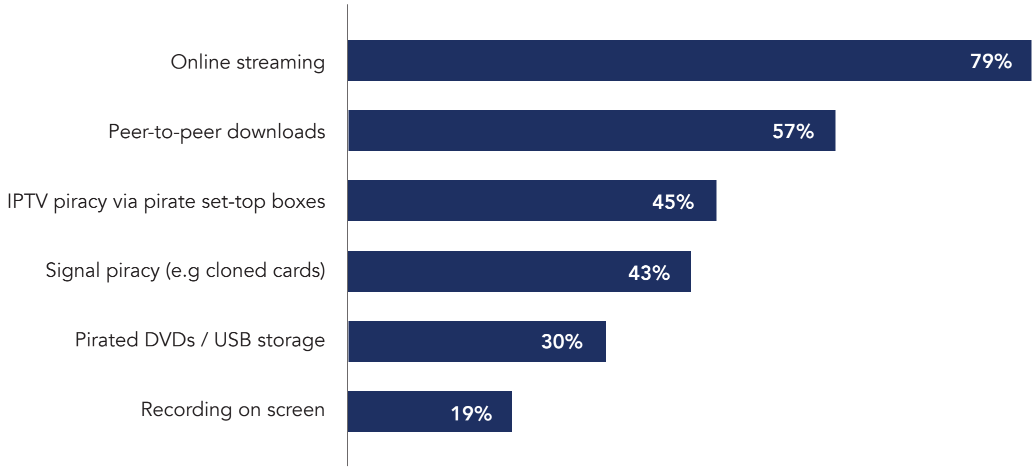
Piracy has exploded alongside OTT reflecting a shift away from slow-to-download and risky .mp4 files to free internet streaming. The quality of pirated content has risen dramatically with instant access to new film releases, TV series and live sports accessed on illicit streaming devices. Perhaps most notorious is Kodi, the free and open-source media player, that is popular for its third party plug-ins to facilitate unauthorized access to copyrighted media content, as well as boxes sold pre-loaded with add-ons. All of this has had a big impact on the level of pirated streaming media today. When measuring total web traffic to 14,000 of the biggest piracy websites, 73% were for streaming content sites while only 17% were to torrent sites[13].

Location piracy is also on the rise involving a virtual private network (VPN) or a fake location app to access content for free and is also causing a loss of revenue for broadcasters. The mix of software, such as VPNs or DNS masking, along with hardware, such as Kodi boxes and Roku, has created an authentication nightmare.

For pay TV providers globally, online streaming, peer-to-peer downloads and IPTV piracy via illicit streaming devices are the forms most affecting providers globally. The impact is most felt in Latin America and Asia Pacific.

[10] http://www.adweek.com/tv-video/targeted-tv-ad-spend-will-reach-1-26-billion-this-year-up-66/#/
[11] https://edelmandigital.com/wp-content/uploads/2016/12/2017-Edelman-Digital-Trends-Report.pdf
[12] https://tvtechnews.eu/2017/07/21/video-services-analytics-market-to-hit-3-7bn-in-2022/
[13] http://www.multichannel.com/node/413875

**Streaming, P2P downloads, and IPTV piracy are seen as the most important forms of piracy**



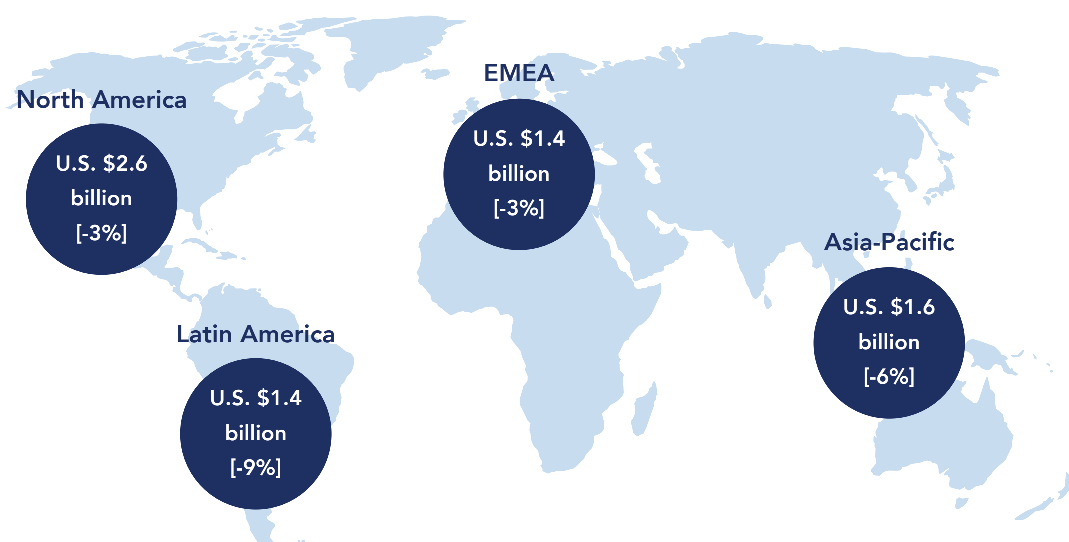

*Source: http://www.ctameurope.com/wp-content/uploads/2017/10/CLICK-HERE-TO-DOWNLOAD-NAGRA-REPORT.pdf*

Many of those who are most impacted by piracy have little visibility into the damage being done as it's impossible to measure, unlike torrents, which leave a trail to follow in terms of number of downloads (and revenue loss). However, signal piracy and hardware piracy can be estimated at the household level with 15% of households in Latin America engaging in illegal pay TV services and 14% in Asia Pacific. In North America, 9% of households pirate content and in EMEA, 7% pirate content. If these households subscribed to legal services, $28 billion in revenues could be realized. However, if the pay TV industry serviced 1 in 4 of those pirating content, which is a conservative approach, the losses would be between $6-$8 billion according to ABI Research.

**Estimates of piracy value are U.S. $6 billion to U.S. $8 billion annually**

The pay TV industry could gain U.S. $7 billion per year by converting one in four pirates to legal users

**Global = approximately U.S. $7 billion (~4% of revenue)**




*Source: ABI Research (pdf)*

## Stopping piracy begins with proper protection

There are steps that pay TV providers can take to protect revenue streams including taking steps to protect content while minimizing overhead. One proven method of protecting valuable content against rampant piracy is digital rights management (DRM). Operators are no longer adopting DRM because they are forced to do so, but rather because it protects their content from piracy, especially during a time when their services are being threatened by competing OTT services. DRM is especially important as rights-holders and broadcasters are seeing viewers circumvent territorial licensing policies and as millions of international customers gain unauthorized access to content licensed in the United States.

One hurdle to DRM is the total cost of ownership which includes capital expenditure and operational expenditure. There is a trifecta of overhead costs to contend with for content owners as the value of content continues to rise, and more hackers attempt to access this content — added to the recurring expense of more devices coming into the market, plus growth in HD and 4K markets. Due to the nature of digital rights, the access controls must be updated frequently, requiring in-house security infrastructure and R&D resources. For instance, nearly 2.5 billion devices shipped in 2016 across nine device types with various chipsets and platforms, browsers and application interfaces. Meanwhile, a high-quality user experience is expected for subscriber retention. According to Frost & Sullivan research, the average cost of porting a secure player to a new platform ranges from $100,000 to $250,000 with a requirement that services support between 10-12 devices – which must also be supported by browsers or apps on yet another 40 devices[14]. The investment required outprices almost all SMBs and most enterprises due to the complexity of the ecosystem.

## Media delivery is constantly evolving — how the ExpressPlay™ Suite can help

Content protection technologies and services enable a trusted environment for content companies to distribute their content. While content protection for digital media is a mature technology, protecting the billions of pieces of content distributed to millions of devices daily is a constant challenge. The Intertrust ExpressPlay™ cloud DRM system provides complete, end-to-end content protection and is the only multi-DRM technology available across all popular platforms and formats.

To capture audiences, relevant and timely targeting is required. By comparing broadcasters' viewer data with our expansive data sets, ExpressPlay Audience™ helps to effectively serve and re-target viewers across devices and platforms. ExpressPlay Ads ™ compliments our audience data by offering dynamic ad insertion and personalized, secure ad targeting capabilities. With client-side ad (CAI) and server-side (SSAI) ad insertion, provide your viewers with a seamless TV-like experience on mobile, browser or OTT video.

The ExpressPlay suite also offers a disruptive card-less Conditional Access System (CAS) that uses open-standard Marlin DRM to enable broadcasters and network operators to deliver content.

[14] http://images.discover.frost.com/Web/FrostSullivan/FS_WP_TCODRM%202016-final.pdf