THE BROADCAST BRIDGE
Connecting IT to Broadcast

The Big Guide To OTT

Part 10 - Monetization & ROI

A Themed Content Collection from The Broadcast Bridge

Contents

Series Overview

By Paul Martin. The Broadcast Bridge.

The Big Guide To OTT provides deep insights into the technology that is enabling a new media industry.

As OTT delivery grows, driven by both consumer demand and content provider strategy, there are many adjustments to manage. They include new production approaches, scaling content distribution, personalizing, protecting, and monetising content, and assuring audience QoE.

Content providers are delivering a mix of live, linear, and on-demand content. Business models are blending - subscription with advertising and direct-to-consumer with service aggregation. The internet-enabled OTT delivery model is driving the media industry through a giant transformation.

There are many broadcast disciplines to leverage in OTT – the concept of “broadcast-grade streaming” means streaming should match broadcast’s capacity for highly consistent, highly scalable delivery of high-resolution content at low latency. There are also new disciplines for content providers to embrace, like delivering highly personalized content and building new relationships with consumers and ISPs.

The OTT technology domain builds on core broadcast distribution disciplines and adapts them to internet-based delivery. New contribution methods, ultra-low latency encoding, and high speed broadband streaming, could mean that ‘streaming-grade’ will become a new gold standard for content delivery. But the fixed and mobile broadband networks we rely on, and the myriad of devices we use, mean that we need to work differently to manage content accessibility and quality. So while the content may be largely the same, there are significant differences to manage between the worlds of OTT and OTA.

The Big Guide To OTT is a multi-part series. Each part tackles a different theme and there are three or more articles per part.

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CX - Customer Experience
Managing Latency
Assuring Viewer QoE
Internet Infrastructure
Content Delivery Networks
Broadcast Grade Streaming
Quality Of Experience
Monetization & ROI

Improving Monetization Through Addressable Advertising

By Paul Martin. The Broadcast Bridge.

OTT offers an amazing promise – to significantly increase the return on advertising spend by targeting consumers more effectively.

OTT, because of the IP-connected devices it serves and the "computer screen format" for viewership, uniquely enables broadcaster advertising to change from a generalised approach to a highly targeted approach. By design, this should increase the consumer's interest level in the adverts they see, and therefore yield better results for advertisers.

The promise is clear, but can we take full advantage of it today?

The Vision

To answer this question, let's define the ideal scenario from an advertiser's perspective as follows:

1. Ad inventory is clearly defined in both Live and VOD services.

2. Ads can be aligned very precisely with the most likely customers.

3. Ads are always delivered, on-time and in the right position.

4. Reporting and analysis of Ad delivery, consumption and effectiveness is fast and straightforward.

The vision of addressable advertising in OTT services is ambitious. But it must be delivered in order to successfully transition the broadcast industry from its current advertising, subscription and licensing models to the next generation of commercial models that create win-win-win situations for broadcasters, advertisers and consumers.

While monetization of content is clearly a fundamentally important subject for any media business, this article focuses on the technical nature of advertising to an OTT audience. Not just for today's OTT audiences but for the significantly larger audiences expected in future.

It should also be noted that this article focuses on a Broadcaster/Content Provider managing and delivering ads within their own D2C OTT service. We appreciate that advertisers work with broadcasters, content providers and MSOs to sell ads but this is not the focus of this article.

Delivering The Vision

In relation to the ideal scenario above, the industry is in a semi-advanced position with significant technical capability. The biggest challenges are operational. As OTT services scale-up and the advertising payload shifts from traditional over the air broadcasting to addressable advertising in OTT, the industry needs to be prepared to address several challenges to achieve OTT's full monetization potential. These challenges relate to the definition of ad inventory, the delivery of ads, and reporting of ad consumption.

Advertising Inventory

We can define advertising inventory as the set of advertising spots presented by the OTT operator to the advertiser marketplace. How this inventory is defined is a critical subject because OTT video presents particular constraints and opportunities.

OTT advertising is a hybrid position between pure digital advertising (e.g. Google Ads) and pure linear broadcasting advertising (i.e. traditional playout-level ad insertion). While the ads can be inserted into OTT linear streams, they can also be inserted and updated in VOD assets, and they can be targeted, scheduled and measured in the same way as digital advertising. Given the possibility to address the individual viewer more personally than linear broadcasting previously allowed, what does this mean for how ad spots are defined in OTT?

Ad spots should be characterized by a long list of parameters about the content being streamed, the consumer who is watching it, and the time that is available for ads to be played. This combination of factors creates the most valuable ad spot. Once a spot and an ad are paired, the ad can be inserted on the client-side or server-side. But the challenge of creating an optimal pairing is largely based on how much data the OTT operator holds about the consumer. OTT operators are constrained by privacy laws, the willingness of consumers to share personal data, and even the administrative overhead of managing the data. Because of this, ad spots are generally characterized by content-related data – in other words the program's subject. This means that OTT advertising looks a lot like linear broadcasting advertising, which is very different from the Google Ads and Facebook Ads experience.

That said, even without a lot of personal data, OTT already provides some very specific advantages for advertisers over linear broadcasting. One example is that it is easy to know where a customer is based and what language they use. Geo parameters can be collected from IP addresses and browser settings, so if a streaming request is made from Italy and from an Italian language browser, it is safe to assume that the ads can be served in Italian and in an Italian context.

OTT operators today can segment their ad inventory based on parameters collected from browsers, apps and devices. By creating these more focused sets of ad inventory the advertising opportunity opens up to more advertisers with smaller budgets.

Technically, this more granular segmentation does not present a challenge. Today's technology is able to handle this targeting and placement of ads. To tailor this further using more personal data relies on a set of data gathering and data privacy rules to be in place, potentially relying on the consumer to willingly provide the data and to trust it will be used appropriately. From a consumer perspective this paradigm will either be rejected due to privacy/trust issues or will be accepted due to their own content consumption goals. OTT operators need to establish how to request and manage this data in order to create the most targeted ad inventory. Those that gain consumers' trust are likely to have the most valuable ad inventory which can be used to leverage

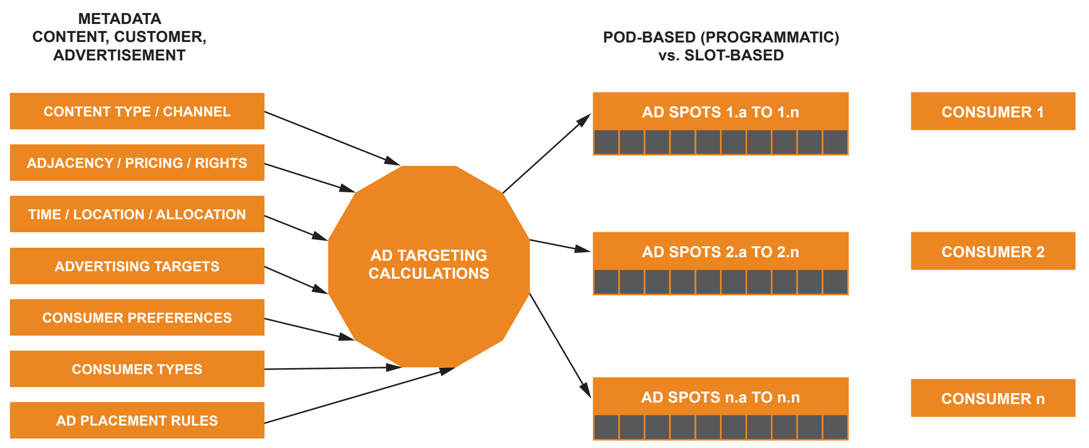


Figure 1 – How Ads should be defined in OTT to create maximum value.

a favourable commercial position in the advertising marketplace.

Placement Algorithms & Ad Delivery

When the rules are defined, the pairing of the ad spot and the ad is a straightforward task that does not cause a technical burden on ad placement decisioning systems. It simply requires sufficient compute power to process small amounts of data quickly.

Operationally, various considerations must be addressed in relation to delivering ads to comply with legal requirements (e.g. adult-only viewing or country-specific regulations), commercial requirements (e.g. brand adjacency), and technical requirements (e.g. devices that support DASH, HLS or other). Metadata must be correctly defined and rules engines must be set-up to deliver the correct ads. Systems must of course support granular details, but this is not highly technical.

The real technical challenge is to flawlessly execute the commands to deliver potentially many different videos to thousands or millions of consumers. There are three overarching technical considerations:

1. Latency. Delivering ads quickly requires low latency. Particularly in live OTT services where individual addressable ads create workload challenges when compared to streaming video (see below). Prefetching identifies in advance which ads will be delivered to each consumer based on the business rules. Prestaging those ads in a CDN or ad server ensures that the selected ads can be delivered at the required low latency. And as ads become more targeted and OTT audiences become larger then bandwidth, processing power and proactive decision-making algorithms will need to keep pace to maintain low latency at scale.

2. Timing. Ads must fit the ad breaks. This is straightforward for VOD and linear streams that have pre-defined durations set by OTT operator business rules. For Live events and "join-in-progress" viewers this is more challenging. When ad breaks are unpredictable, real-time decision-making is required. This places pressure on both ad placement engines as well as streaming latency. Today the approach is to simplify the ads that can be inserted into these ad breaks and only serve pre-staged content.

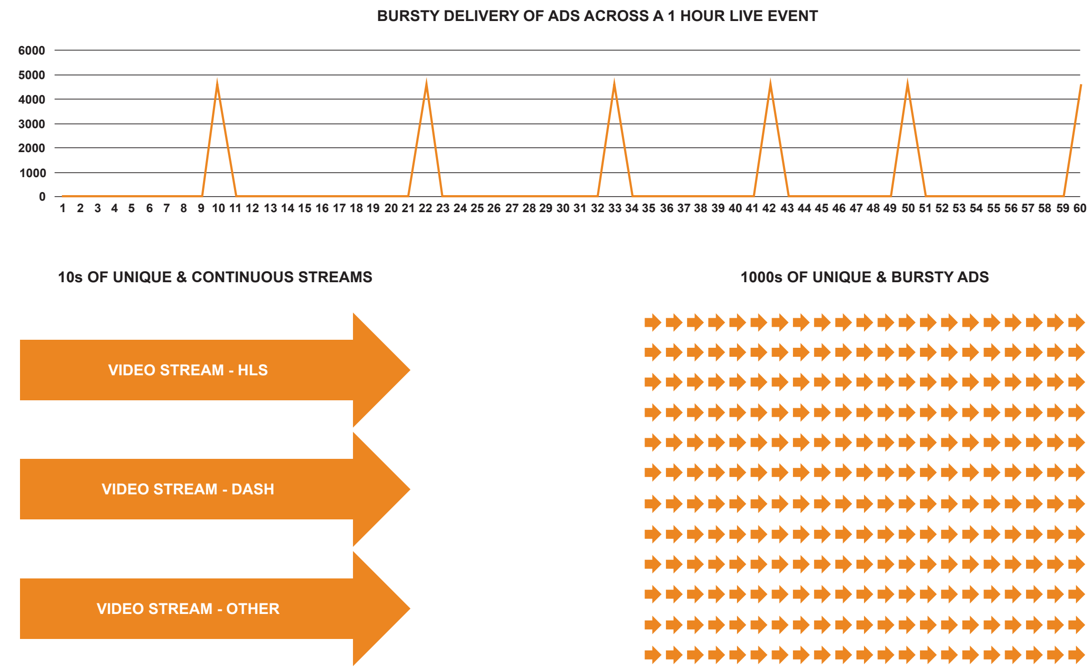


Figure 2 – The addressable ad delivery scalability challenge.

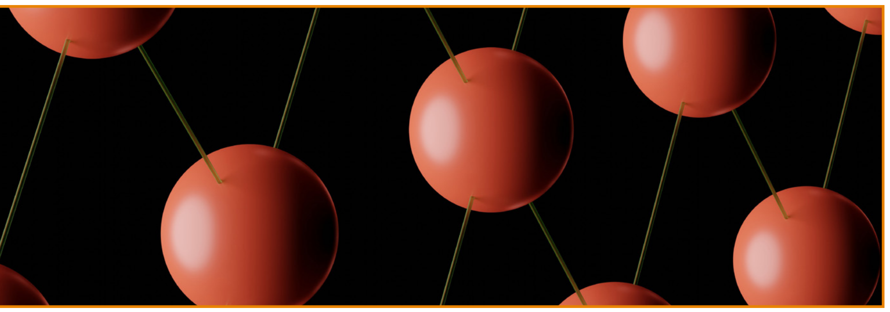
3. Customer Experience. The ad viewing experience should be seamlessly integrated with the program content. Server-side ad insertion performs best for dynamic ad insertion because the video segments and ads can be aligned at the edge cache before streaming to the player. Alternatively, for client-side ad insertion, an ad player and a video player can run simultaneously on the consumer device, overlapping with each other to make the viewer experience smooth as the content changes. Server-side requires ads to already be available at the edge cache. Client-side requires ads to be available on the ad server.

Technically, as OTT services scale-up the CDN-based delivery mechanisms must also scale. For the biggest OTT operators serving content to millions of consumers, the most efficient way to flawlessly deliver personalized ads is to create a private CDN path for Ads. This will guarantee bandwidth and processing capacity to achieve lowest possible ad delivery latency.

Ad Consumption And Reporting

OTT Operators have full control over whether an ad must be played or not. Working with advertisers they can deliver the appropriate type of experience for their viewers. Ad-supported OTT services, which continue to grow in popularity for consumers desiring cost-effective content, have a full range of options including forcing pre-rolls, not allowing fast-forwarding by disabling trickplay during ad breaks, enabling ads to be skipped after a specified number of seconds, and more.

At the moment, connected TVs present a different challenge because ad viewability standards have not yet been defined. In "digital" formats (i.e. smartphones, tablets, PCs) the ad viewability standard means that the ad player was in 50% of the screen and remained there for at least 2 seconds. Once this is defined for connected TVs it will be possible to establish performance KPIs for advertisers to depend on.



Advertisers measure the success of their ad campaigns with various KPIs such as viewing completions, ad click-throughs, qualitative ad recall surveys, store sales in a related geography, and more. ROI is a tough metric to use because of the difficulty in directly tracing the viewing of an ad through to the sale of a product or service, or any other specific action that has a meaningful impact on the advertiser's business. Today's approach to reporting on ad effectiveness therefore relates primarily to delivery, consumption and immediate action. Low percentages of action are the norm – e.g. a low % of viewers clicked through from the ad – which is similar to most types of advertising engagement.

Conclusion

Improving consumer engagement is why addressable advertising in OTT is so important. Increasing marketing ROI by targeting buyers more precisely and improving the "ad to action" conversion rate is a marketeer's mission. OTT as a platform directly supports this goal but needs to be leveraged to reach its potential. The technology is largely in place already although as OTT services move towards prime-time TV scale, it will become increasingly important to assure the flawless delivery of both program content and ad content which can be achieved through the right choice of technology platform. The broader challenge is to master new operational disciplines and overcome privacy/trust challenges so that fully personalized ads can be delivered.

As ad-supported OTT services expand, the win-win for advertisers and consumers is there for the taking. We simply need to deliver the right ads to the right people at the right time. The onus is on the OTT operators to capture their customer data, manage it well, and implement the tools that allow the best possible ad placement decision-making. Once that is in place, advertisers will have access to some of the best possible advertising inventory.

(Re)bundling Is Coming - OTT Is Retransforming The Media Industry

By Paul Martin. The Broadcast Bridge.

OTT is driving the next great rebundle. After years of D2C streaming, unbundling and fragmentation, we are now reaching a stage where we have so many D2C Apps that consumers are looking for simplicity and convenience again.

The great rebundle is set against a backdrop that makes The Game of Thrones plot look simple. A wide range of device manufacturers, streaming platforms, content providers and incumbent pay-TV service providers are vying for success in the media industry. We have discrete live and VOD content environments, aggregators and D2C services, subscription and ad-supported services, and the ability to target and sell products/services in the consumer's viewing space. Consumer power is higher than before due to the number of choices for consuming content. And advertising, one of the biggest drivers of industry revenue, needs to be intelligently delivered across traditional linear and new OTT domains.

Over time the media industry has found economies of scale multiple times. This time, the drive towards economies of scale brings together a new combination of OTT and linear delivery, with new bundles and new technology challenges.

The Money Problem Caused By Fragmentation

Let's first recap the dynamics of industry money flow caused by fragmentation and aggregation.

Bundling of channels has been an industry norm over multiple decades. Over time, Broadcast Networks have pursued scale through becoming multi-channel operators, while the Pay-TV service providers have bundled video with broadband and telephony services for an increased share of the consumer wallet. For a D2C business (i.e., the Pay-TV operator) the bundling of these multiple services into triple play or quad-play reduced churn significantly and has been a long-term staple business model in the Pay-TV market. This created the scale necessary to drive profitable subscription and advertising revenues.

But things always change in the quest to satisfy and win customers. D2C streaming by content providers has fragmented the existing industry, forcing a new competition to aggregate.

In the world of OTT, subscription services led the way with an "on-demand watch what you want without ads at a much lower monthly cost" model. Clearly this has a strong appeal to many consumers. But we are now seeing a growing number of ad-supported services emerging as linear audiences continue their migration to OTT and as consumers reach their budget limits.

But too much choice is not a good thing. For the advertisers, more choice for consumers means that the audience is fragmenting. There are more places to go for content, so there are more places for ads. The advertizing process become more complex and spend is diluted. So advertisers struggle to get a cross-platform view of their ad performance and their audience. For example, connected TV platforms have become another separate advertising domain like Facebook and Google, rather than a standardized syndicated network like Linear television offers to advertisers.

It's clear that fragmentation is not helpful for the advertisers working with the media industry, even if it suits consumers. Advertisers need economies of scale. Fragmentation works against this principle. The very large industry revenues driven by advertising, currently heading towards $1 trillion per year, will naturally shift the balance of power back towards the larger entities that offer this scale.

Bundle 1 – Ads & Subscriptions. The first bundle for D2C streamers is to combine subscription and ad-supported services. VOD has been the core of OTT for many years, with the major players like Netflix driving subscription models, while national broadcasters have continued to offer free-to-air ad-supported services with a smattering of premium ad-free subscription services.

But now ad-supported services represent a growing % of total streaming. Data from Xperi show that in the US market ad-supported services represented 20% of total subscriptions in Q4 2020 and grew to 24% in Q1 2021. This appears to be driven by even more live/linear content making it to OTT platforms plus the household budget issue. Considering that the highly concentrated US pay-TV market peaked at around 100 million customers in the 2010-12 period with a market share of 87% of US households, and the UK's less concentrated pay-TV market served by Sky, BT and Virgin has a market share of 55% of the 27 million households, then it is likely that the ad-supported OTT figure could be at least 30%-45% of the total market. It could easily be higher if people only subscribe to a small set of apps but use many more. This market share figure is critical for the future of most broadcaster's D2C streaming services which will generally be supported by advertising revenues.

Bundle 2 - Content & Merchandising. Bundling content and retail is another evolving approach, made more measurable with OTT services that allow the online shopper's "click-through" measurement. This could be the second area of bundling that helps the D2C's revenue line.

We know that most people are not shopping when they are watching TV. In general, it's a lean-back entertainment experience instead of a lean-forward shopping trip. Direct Response Advertisers working with broadcast advertising have been the most proficient sellers, knowing how to make the phone ring through their advertising. But as a rule, the media industry has not yet cracked the code of retailing while delivering content. So, advertisers focus on creating awareness rather than directly selling products and services.

Which is all well and good, but revenue must be generated at some point to cover the cost. With OTT services, perhaps more than ever before in the media industry, there is a general opportunity to monetize the content by retailing. Content delivered OTT in the right screen type at least presents an opportunity to promote products and services alongside content. In this great rebundling it remains to be seen if the media industry with their advertising partners will be able to crack the retailing code.

Bundle 3 - Linear & OTT Advertising. Even though there are subscription models and other potential revenue generating models for media businesses, advertising will remain a top priority for the industry. And for advertisers themselves, broadcast and accompanying OTT services remain an attractive advertising medium.

Advertising on linear broadcast TV provides advertisers with fast reach and relatively high engagement, it scales quickly with the audience, and it is easy for advertisers to buy. Alternatively, OTT offers targeting capabilities and provides near real-time data plus effectiveness measures. Achieving scale for advertisers requires bringing both platforms together into a singular advertising campaign approach. Technology solutions provide the capability for intelligent cross-platform management of linear viewers with connected TV advertising, as shown in figure 1.

In the OTT space, advertising campaign managers are becoming more sophisticated at predicting their audience and their reach through ever-improving data sets and analysis techniques. Their efforts to optimize ad performance are based on balancing the effectiveness of targeting vs. the campaign reach. OTT campaign managers can now pinpoint what “John” wants, but they still need to figure out how many Johns there are in the market. Reaching the maximum number of Johns requires constant tuning of ad frequency, ad sequencing and ad timing.

At a technical level, the addressable advertising in OTT links up with much more sophisticated outcome measurement. Consumers send a lot of signals about how the ad influences their behaviour. Online journeys can be tracked and signals can be ingested into decision-making algorithms which are optimized in real-time to allocate ad spend to the best performing ads and channels. It is therefore helpful that dynamic ad insertion in OTT is no longer a technical challenge. It can be scaled from an ad delivery perspective with elastic cloud services and fast delivery of ads. That doesn’t mean it is perfect. Frequency Capping is still an issue that is not yet addressed. Over-frequencing in connected TV ads is common, but almost unheard of in linear TV.

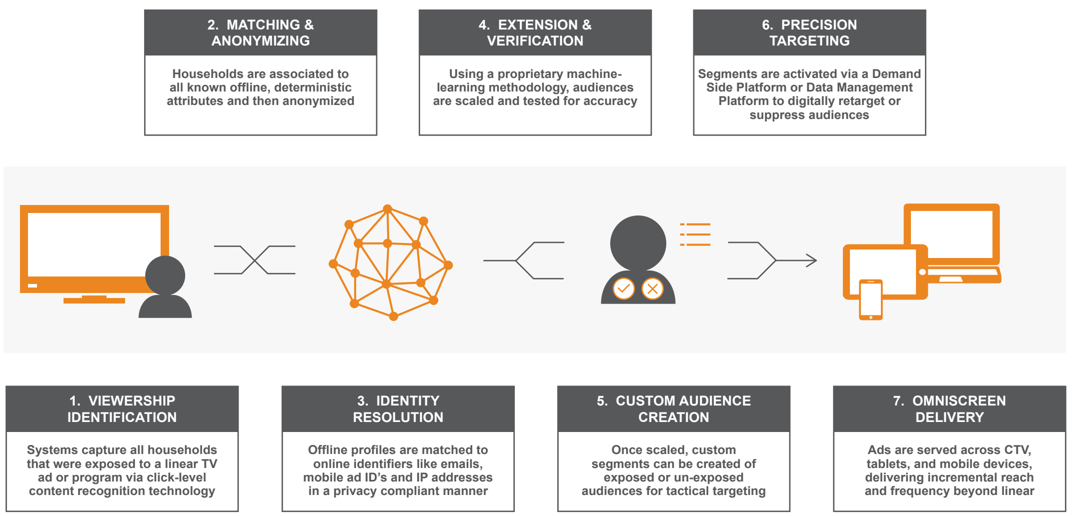


Figure 1 – Bundling of Linear and OTT ad campaigns for multi-screen delivery.

Bunding Is Coming

Because fragmentation is the enemy of profitability, we know we will see more and more bundling until economies of scale are re-optimized. We will see bundling of live and on-demand service types, of pricing models, and of content and retailing. And in the back-end technologies we will see closer integration between Linear and OTT ad platforms – to buy and sell inventory and to deliver general and targeted ads in a highly measurable and actionable way.

But outside of the D2C Streamers control is how the various separate advertising domains will evolve. Will we see consolidation back into massively centralized advertising platforms? Will the device giants choose to cooperate to create easier ways for advertisers to reach scale? Will collaborations emerge between device manufacturers and network operators? Will we need regulators to step in?

The expert opinion is that power structures in the industry will ultimately dictate how the advertising environment evolves. Today every major player wants to be a powerful walled garden because this is in their commercial interest. Device manufacturers, media businesses, Pay-TV operators, streaming platform companies and cable/telco/mobile operators are vying for position. Today, each area is pushing forward alone because the whole OTT video space is growing. At some point coalitions will form as walled gardens reach their limits of scale.

Already, because of content platform fragmentation, we have new advertising platforms emerging to offer aggregation services to help advertisers work with this myriad of separate environments. Xperi is an example of a business offering such a platform. As Walt Horstman, VP Monetization at Xperi says, “At Xperi we are bundling our linear TV data with our Connected TV advertising offerings so that we can draw insights from across platforms and maximize audience reach for advertisers.”

While The Game of Thrones constantly reiterated that “Winter is coming”, in our Media industry we know that there is an ongoing tussle between Content and Distribution involving many would-be kings. So, who will win in this great rebundling battle? A basic rule is that the billing relationship is key, so the platforms like Apple, Amazon, and Roku, plus the network operators like Comcast, British Telecom and Vodafone would seem to have the upper hand in their respective regions. A big question is whether some of these companies want to be in the video business and support advertising in video services, or whether they will leave this space to the content companies.

Whichever way it goes there is a lot to play for as the annual advertising revenue of the global media industry heads towards the $1 trillion mark. Bundling is coming.

The Future Of Sports Media & Fan Engagement

By Paul Martin. The Broadcast Bridge.

This is a story about the COO of a media business, that shines a light on the thinking underway at the leading edge of the media industry, where the balance shift from Linear Broadcasting to D2C Streaming is firmly underway.

As the media industry transforms to offer more personalized entertainment experiences, the business focus is to cross over from being a pure content company to being a customer engagement business that can serve audiences and partners in a new way.

This particular COO is driving a relatively rare type of media business, due to the combination of its characteristics. It combines linear TV and D2C streaming, is truly global, is focused on live & non-live sports content only, and has a mix of businesses across territories including linear-only, D2C-only, blended Linear-D2C, and a network of marketing, studio and technology services for rights owners and brands.

It is this balanced combination of linear and D2C, and the firm focus on the fast-paced and emotive world of sports that creates an intense crucible of experience to give this COO a particularly deep insight into the thinking required to succeed as a media business. Starting from this type of business, these thoughts can cross over to many types of different media companies to apply in their own domains.

A Content Business At Its Core

The core of the media business is content. In the linear domain, the business is to package content into a proposition for the consumer and deliver it through as many consumer-facing platforms as possible. In the D2C domain, the business is to provide a choice of on-demand, live and non-live and scheduled content that gives the customers a choice of what to watch.

New technology has enabled this transition to D2C delivery for live and on-demand content, which has created a much larger range of consumer choices. It has enabled the channel providers, and even the original rights owners, to be their own D2C businesses rather than relying on channel aggregators.

But now the media industry has produced such a large number of D2C propositions that consumers need to subscribe to many more services to see all the content they want. Because this becomes inconvenient and expensive, and is not always in the consumer's interest, this in turn has opened opportunities for the re-bundling of D2C Apps and linear content offers by the incumbent aggregators (e.g., Sky, Comcast) and created new aggregators (e.g., Amazon, Roku, Smart TV brands).

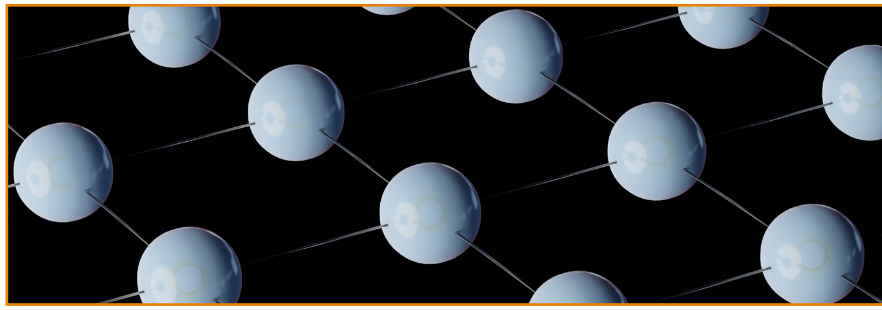
From the perspective of a media business that previously just packaged content into channels, and now also offers D2C content services, the commercial choices to make between bundling and not bundling become business critical, because each business model is very different. But the first principle for a media business, is that content is the core product around which everything else revolves.

The Business Model Transformation From B2B To D2C

As our featured COO emphasises, the transition from selling content to content aggregators (B2B, business to business) to selling content directly to consumers (D2C, direct to consumer) requires a fundamental business transformation for a media business.

From a P&L perspective, content aggregators have had the power of the content bundle – bundling sports, entertainment, movies, kids', news, and education shows. Different bundles can be created that appeal to different consumers, and the diversified business model has worked. In Europe, Sky's 27 million subscribers across 3 countries is a prime example of the success of the bundle.

Multi-channel media companies have an advantage based on the variety of content they have. The media company with a single type of content, such as sports, often has the most appealing content on the market but also needs to find new innovative business models to succeed. The business model, at a high level, involves paying for content rights (that continue to be one of the highest costs). D2C distribution results in higher gross margins than linear distribution (because almost 100% of the revenue is returned to the Content Provider), but customer acquisition and customer management add new costs (which are not present in the content aggregator model). There is also a change to the revenue level, which can be lower compared to distribution through content aggregators unless customer subscriber levels are high enough. In the end, the break-even point is high in terms of the number of subscribers, and to achieve the right ROI is difficult without the bundle, but it is true that the D2C route also comes with huge opportunities.



Transitioning from B2B to D2C is therefore an entrepreneurial move to the world of potentially higher profits, in which the best companies could win big. But the risks are high as well.

For the COO of our featured media business, the current revenue mix is still significantly skewed towards the B2B model but with a growing D2C revenue line. In the coming years the business plan foresees a revolution in the revenue mix, as D2C revenue lines are developed for advertising, in-app purchases, in-

P&L CATEGORY	B2B	D2C
Overall Revenue	Higher	Lower
Revenue per Subscriber	Lower	Higher
New Revenue Opportunity	Low	High
Cost of Content Acquisition	Equal	Equal
Cost of Content Distribution	Higher	Lower
Cost of Customer Acquisition	Low	Higher
Cost of Customer Management	Low	Higher
Profit Margins	Lower	Higher (if successful)

Figure 1 – Comparison between B2B and D2C business models for a media business.

app betting, in-app gaming, and new sponsorship deals for different pieces of content. The overarching goal is to diversify away from a simple reliance on the subscription fee by creating more ways to engage with customers inside the content platform that builds revenues in other areas, and ultimately by creating a more comprehensive experience for the fan.

Sports, arguably more than almost every other form of content, creates this opportunity to engage customers in multiple ways. Customers are generally fans, and fans want to engage deeply with their chosen sport, team, or athlete. A sports fan who subscribes to a streaming service could also be interested in buying a ticket to be at the next game in person or purchasing team merchandise. Their allegiances and deep connection with their sport also make them a key audience for rights owners and brands to engage with.

As this COO states, it's important to be ready to experiment with what fans will value and participate in and understand how the business models can evolve, because fans will want to engage with content in different ways at different times and on different platforms. For example, they might watch the live game on the main platform/channel and then watch highlights in their preferred social media app. The media business must be ready to reach customers wherever they are. And in terms of engaging in new transactions with fans like shopping or betting, it is not necessary for the platform to build every environment, such as online merchandising or ticketing stores. Instead, partnering with expert suppliers to integrate their platforms into the media company's app environment will be the way forwards.

For a single media company, this multi-faceted approach is in fact the all-important bundle that will help them succeed. It's about being more than just a content company – it's about being a customer engagement hub. For a sports media company, we could say this is about creating a fan universe. But as this COO points out, the core of the value proposition is always the live sport content itself. Therefore, a natural second focus is to produce non-live content such as sports lifestyle documentaries which is popular with fans and adds new value to the live offering. All the other peripheral elements should be created to increase the experience of the final viewer in the platform and give them more reasons to stay on the platform. The ultimate goal is to earn "engagement time" from the consumer, which leads to different ways to monetize the content, engage partners, and build the business.

The Half-time Break

Moving from a B2B to a D2C business model presents a big opportunity to media businesses, but also some significant risks. In the second half of our article our COO reflects on how media businesses need to think and operate in order to take advantage of this opportunity.

Access To Content

While the D2C business requires this new fan engagement bundle as described in Part 1, as a content business it is important to remain fully engaged with the various content aggregators in the industry. This COO spends a lot of time considering this point. To be a D2C business only is risky – if a consumer is not happy managing multiple apps, with their separate interfaces and payment arrangements, as well as a cross-platform content search challenge, then it is important to still be part of their content line-up when they make the personal choice to take a content package from a content aggregator. The important principle for this COO is to deliver content to the fans wherever they are and however they want it – whether that means a linear TV channel, as part of a content aggregator's line-up, or in their own App.

From this COO's perspective, there are a range of players positioned to be aggregators – cloud service providers, Smart TV manufacturers, incumbent pay-TV operators with broadband networks, and broadband & mobile service providers without pay-TV services. Any business with a broad relationship with consumers that facilitates aggregating content, offering a unified search function, and providing a one-stop payment gateway are positioned well.

A key consideration for D2C is the data that comes with it. One of the great advantages of establishing D2C relationships is the huge amount of information that can be gathered from audiences. When responsibly utilised – and there are many legal complexities to ensure personal information remains protected – this data allows media platforms to better serve their users, make smarter choices on content acquisitions, and much more.

Ultimately - when it comes to B2B versus D2C - it is currently unclear which model will win out for most media businesses. Big global brands like Disney will be able to aggressively pursue a D2C strategy because they have such strong brands and their content travels well internationally. They can more easily attract viewers and subscribers to their proposition because it is so recognisable. Other large players like Netflix and Amazon have a similar ability to operate on a global basis.

Sports is different, primarily due to the nature of sports rights and the more localised/national nature of interest in the content. It is also the case that sports are mostly watched live, which is a different dynamic compared to VOD viewership. What this does is create a natural partnership rationale for sports media businesses and broadband service providers to, together, deliver an excellent fan experience. Broadband providers could operate as aggregators of sports content or at least do commercial deals that help this live content reach audiences at the highest possible quality and lowest latency, which is particularly important for live content and audience satisfaction. It doesn't mean that Telcos would buy sports rights themselves. This has happened and will still happen of course where Telcos want to participate in this type of business, but recent experiences indicate that there are more entertainment-centric businesses that

are willing to invest heavily in sports content with the aim to monetise the content in ways that are more natural to them as media and entertainment companies. But as a minimum, the nature of D2C sports streaming could mean that Telcos continue to participate heavily in the successful delivery of live sports because of their vested interest in winning broadband and mobile customers.

Attracting Different Viewers

This COO is acutely aware that making sport attractive to a younger generation requires some changes to the traditional linear TV production and delivery methods. While older sports fans are generally happy to watch the full game or match on a big screen, the younger viewer is more "social media native" and, partly because of this, is more likely to value short form content. In fact, it could prove that to the younger generation the 10-second, 30-second and 60-second clips are the most important aspect of following their sport. Or perhaps a more immersive experience within a community of fans will be more attractive. Other theories are that younger language should be used in production for maximum appeal. It is easy to over-generalise – live sports still have a massive pull for fans of all ages - so the important point is to measure and prove the popularity of different formats with different audiences.

Another important idea for driving engagement is to use different monetization methods for each type of content delivery. Sponsor-supported, in-game purchases, and in-game betting could all be layered in differently depending on the viewer. But there is a recognition of the danger of 'innovating' the fan experience for its own sake. This COO stresses that the key is to introduce services that add real, tangible value to fans' viewing experience.

A Content-powered Fan Experience Universe

With the D2C streaming model, sports media companies now have the opportunity to become Fan Experience Universes. Not many media companies have this opportunity – sports content is different from mainstream entertainment content because the level of engagement, emotion and passion is generally much higher. For this reason, in media businesses that have a range of content the customers are often called viewers. In a sports media business, they are called fans. With fans, the impulse to engage in subjects outside of the content itself is, by definition, higher.

It is therefore vital to focus on creating engaging experiences on multiple levels with fans. The media business does not need to replicate existing functionality and fan environments that exist elsewhere. What is most important is to create the opportunity for the fan to engage in that experience from inside the sports media business's platform. And while consuming the sports content itself, the opportunity to engage is at its peak.

So, will a D2C streamer change its own self-definition to become a fan experience business? This COO thinks yes and no. No, because at the core of the value proposition must remain the sport itself and this is all about content production and delivery. Yes, because the importance of the peripheral elements that enhance the content is growing all the time.

Finally, it is time to reveal our COO, Alessandro Tucci of the ELEVEN Group which is often mentioned alongside the likes of DAZN and other sports media businesses with streaming at their core. So how does Alessandro summarise where the industry has been and how D2C changes things?

"The traditional media companies have content as King. Content is created and distributed via channel packagers and that's been it basically. For the channel packager – the job has been to build a strong channel brand ("the Castle") around the content offering. So the brand becomes synonymous with great content and is no longer reliant on any one programme. Viewers' allegiances are with the brand, not any one show.

"The growing D2C model brings everything together in one place, with the fan at the centre of things. Content and brand are still key, but D2C also comes with many more ways to engage with the user and earn their time. So it is no longer a one directional service – the relationship between media platform and user becomes much more interactive and engaged. The D2C model also changes the P&L model. It brings together the revenues and costs (marketing, etc.) in one place and places more responsibility on the media platform to do it all. So, more risk, but big opportunities too."

And how does Alessandro summarise the work ELEVEN is doing to build a sports media platform fit for the future?

"Ultimately ELEVEN is about connecting fans with the sport they love wherever and whenever they want it. By offering fans a 'one stop shop' for sport, we build deeper relationships with them and earn more of their time.

"While D2C is key to our business we don't want to be limited by that. We want to make great sport content available to fans across all platforms in the most accessible ways and that means partnering with all players in the market to distribute our content to everyone. This 'platform agnostic' approach has been a cornerstone of our business since we launched in 2015.

"Live sport is the central hub of our offering – we deliver over 65,000 hours of live sport a season - but we also work to enhance it with top social content and long form programming. In NEO Studios, we are fortunate to have a fantastic studio arm that creates award winning sports documentaries and other content for ELEVEN and also third-party platforms.

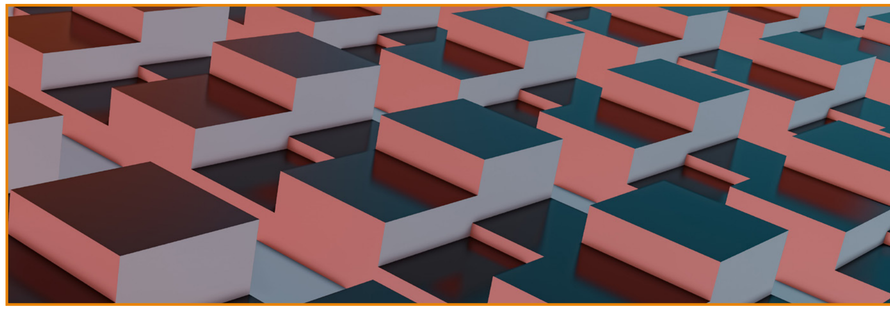
"More than our content, we want to give fans a brilliant home to engage in their passion for sport. We are developing new services to engage fans in a deeper way all the time – whether that's via ecommerce, or betting, or NFTs. Or by introducing new features on our D2C platform to enhance the live experience – like the Watch Together tool we launched a couple of seasons ago – which allows fans to follow games together from a virtual 'living room' and share the emotions of a game together.

"Building this deeper relationship with fans powers our core distribution business and also opens up interesting opportunities to service our rights holder and brand partners. Through our marketing arm Team Whistle, we can help our partners capitalise on the highly engaged audience we have built and communicate with fans in a really impactful way."

The Final Whistle

The ultimate commercial goal of a D2C streaming business is to win more of their customer's time. We all know that each person has a finite amount of time for entertainment, and in the media industry we are all competing for that time with each other and with other forms of entertainment like social media, reading, outdoor activities, sports, music, concerts, etc.

For our featured COO in this article, the overarching point is that once you can connect with a fan through live sport, the key is to offer more and more experiences that keep them on your platform, to entertain, inform, educate, and be as big a part as possible of their spending behaviour. At the final whistle, this is how success will be measured.



The Battle To Beat Content Piracy

By Paul Martin. The Broadcast Bridge.

Piracy is an ancient issue. In the media industry, piracy is the unlicensed use of content that is protected by copyright.

While there are many benefits to OTT video, a downside is that its "over the top" nature where content travels via the internet (rather than a managed network), gives piracy more opportunity to thrive. OTT operators therefore need heightened awareness of how to manage the threat of piracy. But OTT also offers a promise: with the right legal framework, the available technical solutions could potentially bring video piracy to dramatically lower levels.

The Statistics

Various industry reports highlight that Live content, Sports content and Movie content are the main victims of piracy. Some reports estimated the global media industry lost $60 billion of revenue in 2020, with losses forecast to reach $67 billion in 2023. This impacts jobs as the content producers and pay-TV operators manage costs to offset the lost revenue. Recent press coverage shows the big efforts being made to combat piracy, including Singapore's StarHub calling an amnesty on illegal set-top boxes, Portugal's government considering new illegal stream blocking laws to avert the continued tax revenue impacts of piracy, actors asking their audiences to legitimately pay to watch their films, and the European Union taking legal action against member states that have not implemented updated copyright law.

On the one side there are losses, on the other side there are gains. The European Union Intellectual Property Office published a report in 2018 that estimated the revenue generated by illegal video services in the EU to be €1 billion per year. This income was estimated to come from 10% of the total pay-TV user base, or 3.4% of the EU population, engaging in some form of consumption of pirated content.

There is not a simple 1:1 relationship between video piracy and a media business's lost revenue due to piracy, because it is not true that a consumer would pay for content if it was their only way to access it. Recent results from Malaysia's anti-piracy efforts showed a 64% decrease versus the year before in the number of consumers accessing pirated services (from 61% of consumers to 22% of consumers). It also showed that of those that stopped, 20% became paying subscribers, while the remaining 80% switched to advertising-supported services.

But the cost of piracy in OTT is not just loss of revenue. More and more there are real costs incurred by operators. The pirated services ride on top of the same infrastructure as the legal services, without the OTT operator's knowledge or the CDN/ISP operators' knowledge, until the resource usage has been measured and billed to the OTT operator.

How OTT Encourages Piracy

Piracy thrives when security is weak and distribution is easy. Internet technology helps piracy to thrive for various reasons.

Net neutrality prevents Internet Service Providers (ISPs) from unilaterally blocking streams they perceive to be unlawful. Some countries have given legal authority to internet service providers to do this, but most have not. The legal argument preventing ISPs from unilaterally blocking pirated streams is that rights holders must take legal action against copyright infringement, not intermediate service providers like ISPs, CDNs, and social media and payment platforms. This creates a responsibility that is not always easy, quick or cost-effective to implement. This legal issue is where the industry grapples with quickly averting video piracy.

Digital commerce has opened new routes to market. Physical, pirated DVDs are not easy to sell globally, and physical DVDs are easily seized by authorities. The purely digital form of OTT content completely changes this dynamic. Now, the opportunity to deliver content globally and to easily move content from one storage location to another makes video piracy even more lucrative, encouraging more criminal activity.

Delivery to internet browsers creates two big weak points that enable piracy. First, browsers are based on Javascript, which have notoriously weak security features. Second, software-based DRM mechanisms found in browsers are not as secure as hardware-based DRMs found in set-top-boxes and mobile devices.

And finally, even when a pirate operation is stopped, it can be recreated relatively easily. A new business name and new domain, and the business is ready to access the same technology infrastructure and customer base as before.

The Video Piracy Ecosystem

The ecosystem looks remarkably similar to any legitimate video service, especially from a technology perspective.

The elements shown in green are the innocents or the victims in this ecosystem. On the technology side the devices used for viewing pirated content could equally be used for legitimate content. On the people side the victims are the content owners or licensees, who can sue for copyright infringement.

The elements shown in red are the perpetrators of the crime. These parties, especially the Unlicensed Content Providers and Subscription Wholesalers, are the subject of extensive criminal investigation and prosecution by law enforcement authorities. The cycle of assessment, investigation and prosecution by the rights owners can be continuous and complex. The question "is it worth it?" is central to the rights owners' decisions about how far they go to address piracy.

The elements shown in orange represent a highly complex legal situation, which is managed differently by different regulatory bodies in different countries.

Security Best Practices

So, is it worth it? The security experts know that battling piracy is multi-faceted and continuous. And D2C streaming is raising the stakes for the content owners to assure their revenue, given their direct relationship with paying consumers instead of a B2B commercial relationship with pay-TV service providers. So, what can be done?

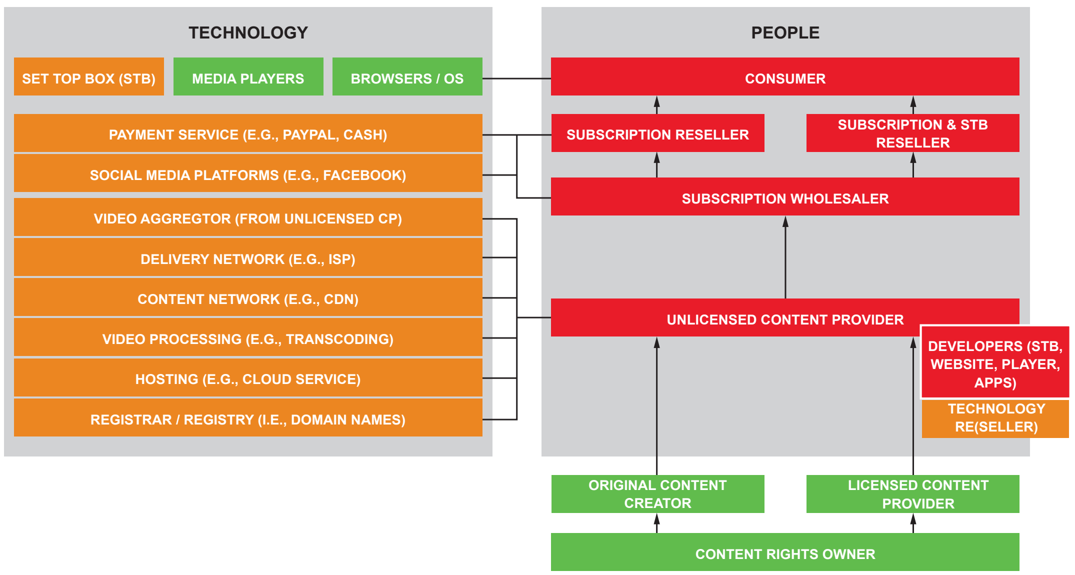


Figure 1 – The ecosystem for video piracy.

1. Start With The Basics. One of the observations from industry experts is that content security can be treated like home security, which begins with the basics – i.e., lock the doors, close the windows. The equivalent security mechanisms for OTT video streaming start with a DRM solution. DRM "locks" need to be applied at the content source. And because OTT services deliver services to multiple consumer device types, multi-DRM solutions are required.

2. Understand The Security And Piracy Threats. Before you start buying and installing alarms, security cameras, etc. you want to know the value of what you are trying to protect and what the potential weak points are in your house. Similarly, in video piracy, we must assess the security and piracy threat, understand how much content is being pirated, and calculate the cost of piracy to the organization. Anti-piracy investments can then be directed and sized accordingly.

3. Disrupt The Piracy Threats And Security Breaches. Industry security experts are generally approached when content is already being pirated. At this point two things need to happen – stop the hack and stop the distribution. Hacking and piracy communities need to be detected, infiltrated and monitored to establish who is behind the piracy. Pirate sites, platforms, apps, blogs and social media need to be shut down, enforcement notices of trademark and copyright infringements need to be sent, and advertisements for pirate devices, apps and services need to be removed. This requires a multi-disciplinary team of investigators, forensic analysts, legal specialists, security software engineers, and sometimes even law enforcement specialists.

4. Piracy Doesn't Sleep. OTT providers need to continuously scan the internet to find their pirated content and respond quickly. To find their pirated content, forensic watermarking can be valuable. Forensic watermarking enables OTT operators to quicky detect their pirated content and inform consumers that they are watching pirated content. Watermarking techniques include bitstream modification (not optimal for legacy consumer equipment), A/B Variant watermarking (which has higher costs due to its dual-stream approach) and client-side watermarking (the simplest and most popular method, which must be deployed alongside a robust DRM solution to protect content until it reaches the device where the watermark is applied). Consumer notification will not stop all piracy, but it helps.

Without watermarking, the process of detecting pirated contents will take longer. So when cost is an issue, operators can choose to watermark only the most valuable content.

A particular challenge with watermarking comes from collusion, or the combining of streams. When a number of watermarked streams are combined into one, the existing watermark detection mechanisms no longer work, so a new mechanism must be built. This cat-and-mouse game continues as more streams are combined, and although only the most sophisticated pirates with sufficient funds can play this game, OTT operators need to remain vigilant for new methods that pirates use to avoid detection.

5. Up Your Game. Going back to the home security example, the general rule applies - thieves will break into the easiest target. There are several levels where additional investments can be made.

To stop the hack requires continuing to build different levels of security - a strong implementation of more piracy blockers and deterrents – geoblocking, short session tokens, software security, a differentiated content delivery strategy between App and browser, etc. If the content is highly valuable it is unlikely this will stop sophisticated video pirates, but it may deter enough to be worth it.

To stop the distribution requires shutting down websites or streaming platforms (e.g., CDNs). To do this requires an efficient and cost-effective legal framework for dealing with copyright infringement. At the moment most legal actions against copyright infringement are long and complex, because they focus on suing a legally established business for an illegal action.

Technically, a business that transports a stream – like a CDN or ISP – can block that stream. But they cannot legally do this without correct legal authorization, or else they may in turn be sued. But this is where we find the promise of OTT to dramatically reduce online piracy. If the technical mechanisms to identify an illegal stream are accurate, and the legal authority exists for a CDN or ISP to block a stream, then efficient and cost-effective action can be taken to protect content owners' copyright and their legitimate revenue.

6. Educate The Consumer And Reduce The Demand For Pirated Content. Consumer education on what constitutes piracy, the impact of piracy, and the risks of engaging in piracy can also be effective. A growing form of piracy is credential sharing, which is largely a customer service challenge for the content providers more than a legal copyright infringement process. A more serious side of credential sharing is when credentials are sold on the black market – either through a database hack or because sharing leads to information falling into the wrong hands. Consumer education and solutions like concurrent stream management can be effective in limiting password sharing. Consumers will be less inclined to share their passwords if they understand the risks they open themselves to and if their viewing experience can be impacted when there are 10 people using their credentials at the same time.

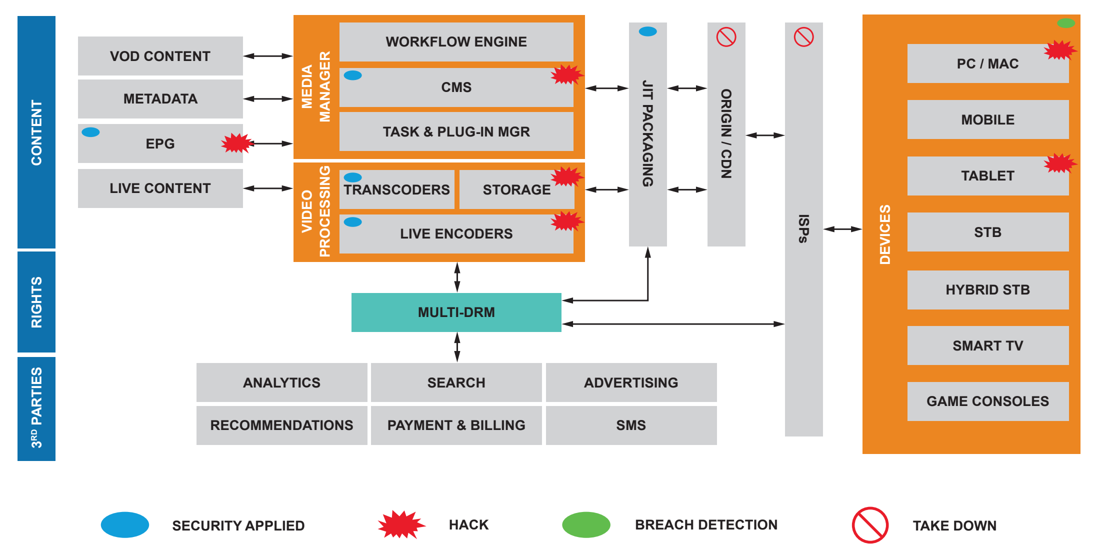


Figure 2 – Points of attack and defense.

As Shane McCarthy, COO Video Entertainment for Irdeto states: "Piracy is not fought with a silver bullet nor is the war won on a single day. It requires fighting daily battles. For this, an incremental well thought through data-based approach is needed with a long-term partner that will stand with you across every battlefield."

Can We Stop OTT Piracy In Its Tracks?

OTT's strength lies in its accessibility. But this is also the weakness that criminals exploit. Video piracy is known to reduce the revenues of content providers and increase bottom-line costs. As OTT grows, the scale of loss could grow significantly.

Battling piracy is multi-faceted – technologically, commercially and legally. The security best practices show what OTT operators can do to protect their business within their own current legal authority. In parallel, there is continued lobbying for legal changes to strengthen copyright law and to give authorization to intermediate platforms like ISPs and CDNs to quickly block illegal streams.

OTT's direct to consumer streaming model is transformative for many reasons, including mobility, convenience, addressability and new viewing experiences. To the list, we can add that there is the possibility to literally stop piracy in its tracks. The industry should stay focused on implementing the supportive legal frameworks that allow full use of the available technology.

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