OVER THE TOP VIDEO Executive Magazine

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Spring 2017

OTT Monetization

Attracting Viewers and Extracting Profitable Revenues

Making Money off Mother Nature
NatureVision TV Case Study

Local Content Monetization
OTT's Biggest Opportunity?

Linear TV and Programmatic
Advertising in an OTT World

Foreign Content Finds a Home
Case Study on Bobbles.TV Roll-Out

"MOST CONVENIENT WAY TO WATCH TV THESE DAYS IT WAS FIXED WITHIN THREE MINUTES"

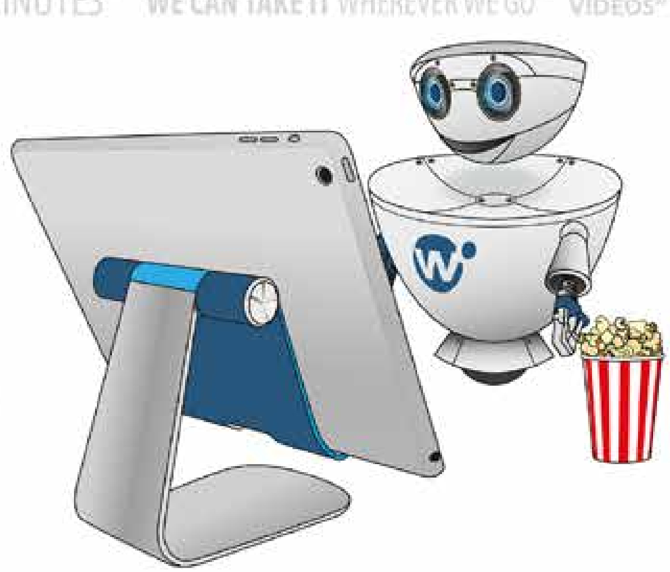
"AVAILABLE ACROSS AN IMPRESSIVELY WIDE ARRAY OF PLATFORMS WORKING SPEEDILY AND SLICKLY WE CAN TAKE IT WHEREVER WE GO"

"EXTREMELY SATISFIED QUALITY OF THEIR VIDEOS"

"LOVE IT"

"COLOURS ARE PUNCHY BUT ALSO NATURAL"

"VERY GOOD VALUE"



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"BUFFERING PROCESS IS INCREDIBLY SMOOTH"

"I LIKE ... FRIENDLY ... OF DEVICES"

MANY HOURS OF STREAMING ACROSS ALL THE AVAILABLE PLATFORMS"

Witbe OTT Monitoring Technologies

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Inside this Issue

Case Studies

Trends & Analysis

Executive Q&A

Executive Insights

Best Practices

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Executive Insights

OTT ROI for Cable TV Companies: Is It Even Possible?

By: Brian Mahony

By now, most people accept that the various OTT services out there, whether they are giants like Netflix or smaller niche SVOD services, are a boon to consumers. Most of those who cut the cord claim they get a positive ROI (return on investment) in the form of cheaper entertainment bills and in some cases more tailored content bundles. There are of course trade-offs, but the cord-cutting trend is here to stay and the industry has to make the best of it. You wouldn't be reading this magazine if television industry fundamentals weren't currently undergoing a titanic shift.

What is less obvious— more difficult to estimate —is any kind of positive ROI for cable TV companies and other MVPDs who may be investigating a move to OTT. Until now.

I am happy to report that I have just concluded a 6-month study of the impact of OTT on cable TV business models. I am grateful to SeaChange, who not only sponsored the study but also gave me access to their customers. I was able to really dig in and get good numbers for a cable company's various CapEx and OpEx costs. I talked to three major customers who represented Tier 2 cable/FTTH/municipal networks. Added to this primary research were a half dozen OTT RFPs and implementations I had the good fortune to tackle over the past 18 months. Combined with FCC data, some third party research, and my extensive knowledge of OTT system costs, I was able to put together a "before and after" OTT ROI model. Without further adieu, here are the major conclusions:

- **Tier 2 cable/FTTH service providers are fighting a losing battle in the TV/video entertainment business. Many of them are losing money, and if they aren't now they will be soon.**

- **The good news is, these same organizations can leverage their strengths and build a profitable and sustainable business model if they migrate to an OTT-based platform.**

I know this is a pretty radical statement to make, so let me back up my conclusions with real data.

Let's first take a look at the present situation— cable companies that do nothing. We modeled a small MSO with 30,000 subscribers offering both cable TV and broadband internet services (we left telephony out of the model). In the most ideal of circumstances ("Year 0"), they are doing quite well, profiting from both cable TV bundles as well as broadband. But unfortunately, "Year 0" for most cable companies was 5+ years ago (if it ever existed). What's happening now, and only accelerating, is a perfect storm of cord-cutting, customer churn due to competition, rising operating expense, capital investments amortized over a small subscriber base, and huge increases in programming costs that can't be passed on to consumers. Below is a summary of what that does to your profit margins over 5 years (see Chart 1).

This is what happens if you do nothing. In fact, several of the companies we talked to said their business already looks more like years 4 and 5. One is losing $6 per month for every subscriber

Brian Mahony is the CEO of Trender Research and Co-Founder OTT Executive Summit & Magazine.

largely because they can't charge enough to cover their programming costs.

So what happens if cable companies migrate to an OTT business model over time? This is what their financials looks like (see Chart 2).

As you can see, their revenues decline somewhat since they are charging less for OTT skinny (or "skinnier") bundles, but their profits are sustainable over time. How is this even possible?
The model goes into great detail but let me share the variables that made the biggest differences:

- CapEx and OpEx are way, way cheaper for an OTT-based TV/video service. Not only do you save a ton on truck-rolls and STB maintenance/upgrades, but most OTT platforms are cloud-based and highly scalable based on growth in subscribers and usage. An added plus that makes the service more attractive to consumers is they don't have to pay

Cable Costs (excluding broadband)	$ 23,482,199	$ 24,660,740	$ 25,948,580	$ 27,351,399	$ 28,875,403	$ 30,527,358
Total Cable and Broadband Costs	**$ 35,362,199**	**$ 35,709,140**	**$ 36,223,592**	**$ 36,907,160**	**$ 37,762,261**	**$ 38,792,136**
Cable Revenues (excluding broadband)	$ 22,809,194	$ 21,212,551	$ 19,727,672	$ 18,346,735	$ 17,062,464	$ 15,868,091
Total Cable and Broadband Revenues	**$ 48,032,990**	**$ 44,670,681**	**$ 41,543,733**	**$ 38,635,672**	**$ 35,931,175**	**$ 33,415,993**
Total Profit	**$ 12,670,791**	**$ 8,961,541**	**$ 5,320,141**	**$ 1,728,512**	**$ (1,831,086)**	**$ (5,376,143)**

Chart 1: The business case if cable companies do nothing.

upwards of $30 per month renting STBs for the 4 TVs in the average home.

• Programming costs are much more manageable. Granted, you may be trading a Cable TV offering with 100-200 channels for one that has maybe 50, but you have much greater control of both costs and content choices versus the more "take it or leave it" monolith you currently get with Cable TV bundles. Some service providers are also embracing OTA as a way to take local broadcast channel costs out of the equation. Others are investigating OTT as a means to more easily source local, niche, and foreign content as new sources of revenue.

• Studies show that a good portion of your subs that move to an OTT service will upgrade to a more expensive broadband Internet service to ensure better quality streaming video. As a next-gen cable/OTT MVPD, you could also package that "turbo internet" service with various OTT TV bundles to help the consumer make that choice.

• You'll be able to win back some of the cord-cutters/nevers that you lost by offering a skinny bundle of local channels plus some free or low-cost content.

You'll be able to grow your network footprint more profitably. Most of the customers we surveyed had a good number of "homes passed" they could offer service to but were reluctant given the negative profits of their current TV bundles. Some also offered retail or wholesale broadband internet services that could be upgraded to an OTT TV bundle.

• Finally, there is a big opportunity to capture higher CPMs for OTT ads that leverage targeted/programmatic advertising technologies.

Of course the devil is in the details and there is a lot more we delve into in the OTT ROI model to explain the above logic, but we don't have space for that here. It's also worth pointing out that cable companies will have to develop some new competencies to make this work—namely becoming better at sourcing and negotiating content bundles as well as becoming better marketers to explain the benefits of their offering to various demographics, especially millenials. But these challenges are becoming increasingly more possible in an entertainment world that is waking up to the fact that the current business model is broken. Something must be done. Will programmers open up their content stranglehold to allow OTT skinny bundles? Will smaller cable companies have the skill-sets to capture all the benefits that OTT has to offer? All good questions. Strategy and financial modeling is one thing, execution is quite another.

The white paper and report summarizing this OTT ROI Model were still under development at our publishing deadline, but if you ask nicely I am sure SeaChange will share the model with you. Contact Steve Sweetapple, Vice President Sales, OTT Americas: steve.sweetapple@schange.com.

Cable Costs	$ 32,227,686	$ 28,891,877	$ 25,269,802	$ 21,265,085	$ 16,767,959
OTT Costs	$ 3,348,004	$ 6,186,071	$ 9,103,539	$ 12,076,316	$ 15,044,185
Total Costs (Cable + OTT)	**$ 35,575,691**	**$ 35,077,948**	**$ 34,373,342**	**$ 33,341,401**	**$ 31,812,144**
Cable Revenues	$ 40,203,613	$ 32,922,292	$ 26,150,663	$ 19,853,049	$ 13,996,267
OTT Revenues	$ 5,147,308	$ 10,556,633	$ 16,113,581	$ 21,728,576	$ 27,332,179
Total Revenues (Cable + OTT)	**$ 45,350,921**	**$ 43,478,924**	**$ 42,264,244**	**$ 41,581,625**	**$ 41,328,446**
Total Profit	**$ 9,775,230**	**$ 8,400,977**	**$ 7,890,902**	**$ 8,240,224**	**$ 9,516,302**

Chart 2: The business case for migrating cable TV customers to OTT.

Yes it's true; cable companies can make money with OTT.

Executive Q & A

How to Better Monetize OTT Content

Interview by Nichole Janowsky with Michael Stattmann, CEO and CTO of castLabs

In this interview, Nichole tracks down castLabs CEO Michael Stattmann to get his insights on how OTT service providers can better monetize their content and provide quality experiences for their customers.

Nichole: Having invested in content, OTT service providers are of course keen to monetize that content, usually through either a subscription-based or ad-based model. What are the best ways to facilitate content monetization?

Michael: The largest volume of views is indeed found within SVOD and AVOD business models, but I would like to add transactional models like TVOD (rentals) and EST (purchase for digital ownership) to the list of viable monetization models. We also see an increasing trend of combining multiple models within a single service.

Having said that, each model has its unique strengths. AVOD promises the highest volume of views with revenues related to these views, SVOD provides plannable revenues while posing risks on losing money on binge watchers. Transactional models offer highest margins but require a large catalogue of latest releases to succeed. To facilitate and maximize monetization of these different models you have to build flexibility into the video players.

For transactional models a player with highly secure and flexible DRM capabilities is needed due to stringent studio requirements on early window content as well as the requirement to offer download-to-own capabilities for EST. For SVOD that's largely in the flexibility of controlling the data consumption as a primary cost factor, enabling DRM controlled restrictions on the number of concurrent streams and offering audience measurement and content tracking capabilities like Nielsen. With AVOD that flexibility comes from supporting a varied range of ad formats such as skippable linear ads, non-linear ads, and sequenced ad groups known also as "ad pods". For example, our "PRESTOplay" range of video player SDKs facilitate these through the common VAST ad framework with IMA protocol.

To another point though, maximizing monetization also means protecting the value of content. Studios, wary of piracy and protecting IP, demand that content providers use DRM secured platforms. You need to facilitate DRM protected content in your players, and also provide a DRM license management service supporting all the major DRM systems available today. Forensic watermarking capabilities through a content processing service are also important.

Nichole: Adopting new technology is often both time-consuming and costly. In what ways can customers face these challenges?

Michael: Service providers will often have a large library of content, not necessarily in the same or latest streaming format, and require license keys across multiple DRM systems for full multi-device compatibility. Player SDKs and cloud-based video toolkits need to support MPEG-DASH, HLS and Smooth Streaming formats, and automate Smooth Streaming to MPEG-DASH conversion on-the-fly. No need for server-side changes. It's crucial to keep extending your player SDKs by the means of plugins which enables customers to adopt new technologies by simply loading an additional plugin.

For DRM licensing, the license management service needs to allow just one integration to support all major DRM systems across all screens, streamlining the entire process. At castLabs, we constantly evolve the DRM capabilities offered while keeping the interfaces to our customers stable. That way our customers can always rely on having access to the latest DRM capabilities without investing development or maintenance efforts.

Michael Stattmann is the CEO and CTO of castLabs, a company specializing in digital video solutions. Michael helps pioneer software and cloud services for businesses to deliver protected premium content to customers online with player technology, DRM licensing, and encoding/packaging services.

One way to speed up player development is to adopt a more flexible JavaScript framework for the browser player, and offer pre-built integration with certain streaming technologies often requested by our customers. This may require forging close relationships with companies like Conviva, Nice People At Work, Wowza, Elemental and Unified Streaming.

Nichole: Monetization is the goal of your customer, but that has to be set against a good quality experience for the end user. How is this realized in today's OTT environment?

Michael: From the player you want consistent playback without rebuffering, which is still cited by streaming users as a key concern (such as Accenture's "Digital Video and the Connected Consumer" report), but ultimately not difficult to resolve using a common adaptive bitrate (ABR) algorithm and

Modern video streaming players need to embrace future standards.

leveraging integrations with QoE and CDN switching technologies.

Where interruptions can delay streaming is with DRM services, waiting for license authorization to access content. Compared to some other DRM services, castLabs utilizes a highly scalable multi-region key delivery to minimize the licensing turnaround time globally to ensure fastest playback startup times.

As mentioned before, we recommend leveraging pre-integrated video analytics technologies such as Conviva's Intelligent Control Platform or Nice People At Work's Youbora. These technologies enable you to analyse users' QoE, benchmark to industry standards, and act upon that data to improve content delivery quality.

Nichole: Consumers of streaming video are consuming online and offline, on more screens in more places than ever before. What are the challenges in providing offline services?

Michael: First, you have two types of offline markets here, emerging markets where internet connectivity is not prevalent and offline is seen as a necessity for consumers to view content; and enabling "content everywhere lifestyles" where there's an appetite for offline playback on WiFi-less flights or public transport where WiFi can be intermittent or non-existent – or simply to save data on a limited mobile data plan. Last but not least are the many entertainment systems in airplanes or busses that are completely offline but need to work on devices brought by the consumer.

In certain regions, India and Sub Saharan Africa in-particular, where data costs are high and internet availability poor, live/VoD streaming can be uneconomical. Where we've worked with clients in these regions, consumers typically download content overnight and watch it the next day, or the service syncs content with the consumer device when connected over Wifi. The player has to be intuitively designed to meet that preference for offline, so we help to facilitate that.

With the "content everywhere" market, you need to enable management of downloaded content, as storage on mobile devices is limited, and support DRM restrictions on downloaded content. Our PRESTOplay SDKs for iOS and Android realize online and offline playback with minimal effort from the user. The service provider doesn't need to provide special files for download, PRESTOplay can download content encoded for streaming.

In working with the airline industry, we also offer an offline DRM solution for in-flight entertainment (IFE) systems as well as streaming networks on other forms of transportation. This offline version of DRMtoday can be deployed in environments with little or no internet access, or where license keys can only be stored locally.

Nichole: HTML5 has become the new online standard as proprietary plugins including Adobe Flash and Microsoft Silverlight are being depreciated by every major browser. How is castLabs interpreting these developments and reacting to them?

Michael: castLabs has enabled a migration to HTML5 video since 2015. Our PRESTOplay SDK for Browsers utilizes HTML5 and MSE/EME with either Common Encryption (CENC) or FairPlay Streaming for DRM and is the only player SDK supporting pre-existing content encoded in SmoothStreaming even for HTML5 playback in all browsers. We believe this is currently the most secure and futureproof configuration for multi-browser video playback. Yet we have to acknowledge some users have not yet transitioned to HTML5 compatible browsers so the need for a fallback option still exists.

For us that fallback is Microsoft Silverlight. Silverlight uses PlayReady DRM, which is also used in Microsoft Edge and IE 11+ browsers for native HTML5 playback. Unlike Adobe Flash Player, it doesn't require an additional license from Adobe for use of their proprietary DRM [Primetime] which also isn't required for any other cross-browser compatibility.

Nichole: Finally, what does the future trajectory of monetization look like in the OTT space as it relates to your future product development?

Michael: An increasingly crowded subscription space is going to set niche services into either fighting each other or pairing together. There'll be a need for more differentiation, new integrations and features that satisfy the increasing expectations of their subscribers.

Though ad spend is rising, ad-based models have a challenge to deliver more relevant ads to users in order to retain customers. We'll be looking at how to better facilitate that with our player SDKs.

In the immediate future we will be implementing support for the emerging Common Media Application Format (CMAF) which promises significant cost savings across our player SDKs.

Case Study

From *Total Recall* to OTT on the Wall: NatureVision TV

By: Jon Gorchow

Although not formally launched until 2015, the roots for NatureVision TV began to grow in 1990, during an innocuous scene found early in the Arnold Schwarzenegger film *Total Recall*. Arnold and his wife (played by Sharon Stone) were sitting down to eat in front of a long blank wall, when suddenly the wall transformed into a beautiful nature scene. They proceeded to have a conversation, but that background was a scene stealer. I had just started a new job at Comcast, where I would stay for 21 years, and essentially forgot about the nature screen until I saw the film again on TV a few years ago. Given the organized chaos of everyday life, and the advent of OTT, it seemed like an even better idea now that it had before. While the concept of calming, relaxation-oriented programming is certainly not new (it's almost as old as television), OTT opportunities could turn it into a legitimate business opportunity.

To start, I would need a content library from which to build. In late 2014 I found a couple of exceptional nature cinematographers sitting on hundreds of hours of footage and a handful of well produced relaxing nature programs featuring beautifully produced scenes and soothing new age music. After some back and forth negotiations, the content was acquired. That turned out to be the easy part.

Our concept was to offer programming that viewers would never actually watch (just like Arnold and Sharon). The anti-TV channel. We would air quietly and seamlessly in the background while "viewers" go about their day, or fall asleep at night. We would enhance any room, any screen, anywhere. Since there are no hosts, and no narration of any kind ever, we would be truly universal. Just as relevant in the US as we would be in China, Turkey, or France. There are no boundaries to nature, or man's appreciation thereof, and the need to relax is equally ubiquitous. We felt that we should be a viewing option in every home and on every screen. It was less about world domination than (please forgive me) world peace (of mind). So now, how to actually make that happen, and how to turn this into a profitable business as quickly as possible?

The initial thinking was that these programs, by their nature (pun intended), must be commercial free. The thought of interrupting relaxing nature programming with commercials seemed completely out of place. So the logical choice was to create VOD and SVOD apps for burgeoning OTT platforms like Roku, Amazon Fire, and Apple TV. We found a relatively small and inexperienced app developer overseas, went through the ups and downs of getting those apps and our website developed economically, and in 2015 we launched "NatureVision TV, The All Natural Channel". At first, we included 18 hour long programs for $2.99. We continued to build our programming library and looked for other opportuni-

Jon Gorchow founded NatureVision TV in 2015. Prior to its launch, Gorchow had spent 21 years in various senior executive level positions in the corporate offices of Comcast Cable Communications. Gorchow has an MBA in Media Management from the University of Texas, and a dual Bachelors of Science degree from the S.I. Newhouse School of Public Communications and the Whitman School of Management from Syracuse University.

NatureVision TV includes the best Mother Nature can offer in HD quality.

ties to air our shows without interruption. We were fortunate to get a deal with Netflix, and added programs to Amazon Prime as well! The next piece of the distribution puzzle fell into place when we began efforts to distribute individual programs around the world through third party licensing deals to what we considered "natural" targets such as TV networks, airlines, medical facilities, spas and resorts, and digital signage displays. Slowly, a revenue stream started to build.

In early 2016, an OTT operator called Pluto TV called. Frankly, I had spent my career in cable, and hadn't really dug deep into the OTT playing field yet, so I didn't know much about them. They liked what we were doing, and wanted to create a linear channel on their rapidly expanding service. Rather than offer our content as a premium service, they wanted to include commercial breaks during the programs, an idea that seemed out of place. I agreed to a "test" and provided a handful of programs that they would stitch together to create a channel (running those same programs back to back every day). I was skeptical that viewers would watch, but fortunately, I was wrong. Our viewership stats were fairly remarkable right from the start (soon generating monthly audience cumes of 5%+, with a startling average viewing time of approximately 90 minutes). The channel was in fact being used day and night in the background, just as we had imagined, and the commercials didn't make them turn the channel.

A linear channel is of course a beast that must be fed, so along with the original footage, and the original cinematographers, we found a few other highly qualified nature cinematographers, spread them out geographically, and created a growing library of programs, some with no music at all (letting nature do the talking). We began producing in 4K since programs shot in that format could still be "dumbed down" to HD. That solved the programming piece.

Next we had to find a service that could handle piecing our channel together and broadcasting it in such a way that OTT, cable, and satellite operators could see it, and distribute it. Fortunately, those now existed in the OTT space as well. We found a small company in California that had started doing just that. Last but not least, we found companies that could take our channel, find name brand advertisers, and actually insert the ads for us on each individual OTT platform.

The pieces had somehow come together and by late 2016 we were launching free, ad supported linear channels on Roku, Apple TV, Amazon Fire, Pluto, Xumo, Tubi TV, Opera, Olympusat's Vemox, Rabbit, Flipps TV, and Android TV. Our simple concept, exceptional production values, and immediate acceptance by audiences (who continued to find us despite a complete lack of marketing and an overwhelming array of viewing options) opened doors for us with nearly every distributor we have met. Our 24/7 linear channel quickly gained favor and has recently launched on Sling TV, and we have a pending launch as a basic channel on tradition cable, with other cable deals close behind. The rapid growth and acceptance by viewers in OTT had put our new channel into or on 50 million homes and devices in less than a year, and established our new network as a legitimate programming service in less than two years.

The sky is literally the limit for NatureVision TV, and our success is a metaphor for the OTT opportunity at large. You can find us on United Airlines and Japan Airlines, to name a few. In addition, through a partnership with a distributor, and a satellite company, we have launched an all 4K linear channel via satellite which is currently being tested with several MSOs.

So taking a step back and looking at all that has happened in just a matter of months, what have been the keys to our rapid growth? First, we believe the timing is right for our content. For those watching the news today, turning the channel and having stress-reducing NatureVision as a viewing option is not such a bad thing. The Weather Channel seemed to have exactly that in mind during November's Election Night. While nearly every channel delivered the same election results, The Weather Channel counterprogrammed the coverage with, you guessed it, a 10 hour marathon of NatureVision TV. In addition to the right content at the right time, exceptionally well produced, we took a "no deal is too big or too small" attitude, and were open to any and all types of distribution (VOD, SVOD, linear, third party licensing). As long as revenue was involved, we would find a way to say "yes". As a result, based on our rapid rise, we have every reason to be excited about the nature of our business. Thanks Arnold. □

Subscribers are willing to pay for soothing sights and sounds in a chaotic world.

Executive Q & A

The Future of Linear TV and Programmatic Advertising in an OTT World

Interview by Brian Mahony with Placemedia's CCO Christopher Raleigh

In this interview, Brian Mahony sits down to chat with Placemedia's Chris Raleigh.

Brian: Chris, thanks for joining us for our executive Q&A series. Can you begin by giving us a quick background on yourself and Placemedia?

Chris: Sure. I am the Chief Commercial Office for Placemedia. Placemedia is a supply-side platform focusing primarily on the linear TV business. What we do as a company is we aggregate access to linear TV inventory, whether that's from the cable networks directly, MVPDs, satellite, telcos, etc. Then we assess their inventory and estimate their audiences through our patent-pending platform and present it to the demand-side of the business which consists of a combination of the DSPs (demand-side platforms) primarily coming in from the digital side, as well as traditional agencies and clients directly. We've been in business for four years. The first year we essentially built our platform, which does two things: first, it forecasts the inventory we have access to via direct relationships with our supply partners; second, it estimates the audiences that we deliver. By "audience" I mean both the primary audience which is typically age/gender as measured by Nielsen/Rentrak, as well as what we consider the strategic targets— which are often referred to as the "left-handed women who drive luxury SUVs." The real value of our platform is delivering those audiences to advertisers.

Brian: Thanks for that background Chris. For the benefit of our readers, how do you define "programmatic." What is it exactly?

Chris: Well, all sorts of people have been trying to define programmatic for some time. We try to break it down very simply. In our mind, it's a combination of data-driven audience targeting combined with technology.

Brian: That's a helpful definition. By "data-driven" it sounds like you are adding a layer of intelligence on top of traditional television advertising and targeting. Explain that a little more please.

Chris: Exactly. What we're finding is that clients— meaning CMOs and procurement officers— are wanting to do more precise targeting, as in the digital space, using new data sets. They also want to have improved reporting and execution. There is a certain efficacy in regards to utilizing the platform on a digital basis and yet, particularly the largest advertisers will still spend the bulk of their money on linear TV. So they're asking to have those same types of attributes and benefits in the linear TV space. What we are able to utilize is the additional data-sets that really drive down to find the true targets of these advertisers. So whether it is using third party, second party, or even first party data, we are able to go beyond just age and gender to reach what we consider the strategic target.

Brian: Can you please illustrate how this process works from the purchase decision to the analytics, reporting, etc.?

Chris: The business is evolving in different ways. We have data-sets that we have in-house. So for example if you want to target men, $100K+ that have kids in the household, we have that data and we can find those audiences for you through the cable television networks that we partner with. What we are also finding as the industry develops is that the DSPs are pushing hard to include linear TV in their cross-platform offering. They strive to utilize the available data-sets, often times 1st party from their clients. They've already targeted those audiences on digital properties including online video and are able to identify which networks and dayparts deliver them. In those cases, they will come to us "prescriptively" and ask us to serve ads to those audiences and facilitate getting the ads to the right people. We can either utilize the data we have to identify the inventory that delivers the impressions or we can do it prescriptively, whichever way the client wants to work with us.

Chris Raleigh is the Chief Commercial Officer of Placemedia, a leading supply side platform (SSP) for linear TV. He oversees the aggregation of inventory from media company partners and manages the companywide revenue generation from advertisers, agencies, and demand side partners (DSPs). He has 20+ years of managing linear advertising sales for national networks including the NBC network, The Weather Channel and Game Show Network in addition to their mobile, OTT, ITV VOD, online, streaming, and other leading-edge technologies.

Brian: Chris, can you give us an example of the "before and after" so to speak. Before, I might sign up to buy

ads for "Big Bang Theory" vs. starting with the open-ended goal of targeting millennials. What is the difference in approaches?

Chris: It's very different in a sense that historically when you buy national linear television, you say "this is the audience I want" and you will get a plan delivered back to you by the networks that has a standard daypart mix with a prescribed percentage of primetime, daytime, weekend, etc. and so it is very much set in its ways. You are not able to say that my target audience only watches certain dayparts and the others are wasteful. What we are able to do is to cherry pick the best networks and dayparts for that particular strategic target audience, resulting in a higher eCPM, or effective CPM, making your investment much more efficient. I am not saying that the primary CPM, that is age/gender, is going to dramatically improve from an efficiency perspective. The real value is the reduced cost to reach the "strategic target audience". Once you start to move beyond program-based targeting you can really start to find that strategic audience you want. Content is still important but what we find is that our approach allows you to go deeper and also be more efficient in reaching your target audience in the programs they are watching.

Brian: So let's talk a little bit more about the benefits then. What I am hearing is the benefits include better targeting your strategic audience and a more cost effective ECPM. Are there other benefits that aren't quite so obvious?

Chris: Yes, one of the big ones is the ability to manage both reach and frequency. For example, in a fractionalized marketplace where in a typical national linear buy you might be going maybe 15 networks deep, you're not going to effectively capture that audience with the other networks that are out there or with the dayparts you may not be buying. Now, you are going to be able to extend your reach pretty easily across a broader set of inventory. Or, if you bought those 15 networks on your traditional Upfront buy, then you can come to us, blacklist those 15 networks, and work with us to extend the reach of the campaign in other areas.

Brian: Is that an approach you see your clients take, where they leverage a traditional ad buy process but then come to you to target more niche audiences?

Chris: It's not necessarily niche audiences but it's that strategic audience they are looking for. We are able to deliver that much more effectively and efficiently. So for example, if a client wants to go deeper and wants to find which dayparts of an additional 20 networks to buy, it's very, very labor intensive to do that. We can certainly easily execute it. What we are finding is some of the larger advertisers are using programmatic as supplemental to their larger traditional Upfront ad buys, while some of the smaller or mid-sized clients— or those that have only been participating in digital— realize that it's very easy to reach a national footprint through programmatic and also reach a great audience and great programs versus going through the traditional model.

Brian: Ok, that makes sense. In regards to OTT and multiscreen, where do you see the future going and what is specific or unique about OTT that programmatic can take advantage of?

Chris: Well once again you always have to follow your audience and advertisers know they need to get in front of those audiences. So as we see OTT gaining so much traction over these past few years, we need to figure out how to reach those audiences and do it efficiently. If we've learned anything from the programmatic space in linear TV, you need to be able to create a marketplace and to aggregate scale on both a supply and demand basis. It's a challenge to be able to do that. We think there is a need for an SSP to connect the disparate OTT services for the supply side for scale as well as a need for the demand side to have fewer points of access to be able to efficiently buy those audiences.

Multi-screen programmatic advertising is made for OTT.

Brian: Do you think the platform really matters? In others words, does it matter if I am watching "Modern Family" on my iPhone or tablet vs. the big screen? Does that really change the audience dynamics or the way people are engaging with that content?

Chris: It varies quite a bit. At some point an impression is an impression but I think that is still quite a ways away. There is something to be said for the communal experience of watching a TV on the wall versus watching a very personalized 1:1 experience on a phone. The challenge for the supply partners and content owners is how do they monetize wherever the audience is since they need to have their distribution across all platforms regardless of whether it is OTT, mobile, or traditional linear TV. It is more difficult to monetize content as things get more fractionalized. In the past you might deliver one million households with an OTT solution and not monetize it all. A few years ago, no one really cared about a million households. But in today's marketplace, when you aggregate a million households here and there from all the platforms, they really add up. Because of today's fractionalization, content owners need to figure out how to monetize that and advertisers need to figure out how to reach that audience across platforms. Today's new approach combining traditional ad buys with programmatic, executed across linear and OTT, across all viewing platforms, is a way to accomplish the goals of both the content owners and the advertisers. □

Download-to-Go: Never Mind Road Rage, What Can We Do About Buffer Rage?

By: Dan Taitz

Smartphones are our most treasured, constant companions. But referring to the device as a phone—smart or otherwise—is a misnomer. Smartphones are used for almost everything other than talking. Increasingly, Smartphones are how we stream video, except when we are disconnected or have exhausted our data allowance. Thankfully, there is a remedy for disconnection anxiety and it's called download-to-go or D2G (and the remedy has no side effects).

The Connectivity Problem for Video

Even in areas with great Wi-Fi and 4G penetration, a connection that reliably streams video is often unavailable or subject to hefty mobile data charges. This is especially true when traveling, and isn't that the entire point of a mobile device? Either we can't stream video at all, or worse, we spiral into "buffer rage" after numerous interruptions by the spinning ball.

Either we can't stream video at all, or worse, we spiral into "buffer rage" after numerous interruptions by the spinning ball.

The term may be humorous, but "buffer rage" is no joke. It causes unhappy viewers to stop watching, cancel subscriptions and look for video elsewhere. In developing parts of the world, the problem is starker—smartphone deployment outpaces availability of high-speed connectivity. In these regions, streaming video is more idea than reality, and streaming video services don't offer a compelling value proposition.

For the last few years, the streaming video industry has been in denial that connectivity is an issue. Instead of offering download-to-go and streaming, content distributors saved data by degrading video quality. That is senseless when consumers are paying for high quality, plus-size video screens on their mobile devices. "Uncapped" data offered by some broadband carriers helped only selected streaming services, but doesn't help at all without a connection. The era of ubiquitous high-speed, low-cost internet connections remains years away.

D2G Goes Mainstream

Download-to-go was available from a handful of streaming video services, but the entire industry took notice when Amazon launched download-to-go in September 2015. STARZ followed last April and You Tube Go announced download-to-go in September 2016 (starting in India). Last November, Netflix's early holiday present to customers was download-to-go capability for selected content.

Several leading streaming video services will join the D2G club in Q1 2017. The rest of the industry is busily adding download-to-go to its product road map so they can launch D2G by year end. 2017 is the year that download-to-go becomes ubiquitous. D2G will finally allow us to enjoy TV shows and movies on the go without worrying about Wi-Fi or data charges.

Buffering: OTT's Achilles heel.

Dan Taitz is the COO of Penthera. He has spent 14 years leading prominent telecommunications through the evolution from "plain old television" into the multi-screen, multi-platform world. He's created digital strategies, negotiated multi-million dollar mergers and guided companies toward new revenue opportunities. He has a BA in history from Trinity College; and JD, Magna Cum Laude, from Cornell University.

Monetizing D2G: the Value Proposition

As an executive of the leading provider of download-to-go technology, I frequently talk to prospective customers about D2G. Universally, they love the idea, but ask, "How do I monetize it?" The answer is five words: customer satisfaction and brand engagement.

Consumers love download-to-go: whenever a customer watches a video on a plane or train, that person feels *rewarded* for subscribing. That reward is even greater when subscribers provide the kids back-seat video without paying again to Apple or Amazon for entertainment for which they've already paid at home. D2G also creates greater "stickiness" for services– consumers are unlikely to churn until they have viewed everything they've downloaded.

Second, but no less important, is brand engagement. Consumers take their smartphones with them everywhere. To maximize the opportunity to engage audiences, media brands need to be able to deliver everywhere. Until high-quality broadband connections are freely available worldwide, download-to-go functionality is necessary in order to engage audiences 24/7/365.

Consumers take their Smartphones with them everywhere. To maximize the opportunity to engage audiences, media brands need to be able to deliver everywhere.

Considerations that Ensure High Quality D2G

Following the Netflix announcement, competing streaming media CEOs asked their technology team (if they hadn't already asked), "When are we launching download-to-go?" The good news is that it's easy to implement download…easy to do badly, that is. It's tricky to add a user-friendly download-to-go experience into an existing streaming video tech stack.

Download-to-go can solve "buffer rage."

There are numerous considerations when launching D2G: speed, background downloading and, of course, security and configurability. A streaming video service must be fast— consumers want immediate gratification. It's essential that the download continues to completion when a user puts the streaming app in the background to send emails or texts. Without this feature, disappointment is inevitable. For any premium content, security is a priority and any quality D2G product will be able to enforce business rules like content windowing and observe consumer preferences like download queue order.

Offering consumers download-to-go will attract new and retain existing customers, but only if downloading enhances the customer experience. A bad D2G product will have the opposite effect. Before making the "build or buy" decision, a streaming service should exercise due diligence to make sure that five-star customer reviews will always be the norm. □

Case Study

bobbles.tv: Bringing Home A Little Bit Closer

By: Arnold C. Kulbatzki

A pioneering new OTT service from Bubbles Media, based in Hamburg, Germany, is helping expats all over Europe stay in touch with home. Arnold C. Kulbatzki, Founding Partner of Bubbles Media explains how bobbles.tv (www.bobbles.tv) is combining satellite and OTT to bring together people from all over the world, while giving them a taste of home. This is a good case study on the unique capabilities of an OTT service to tap into an underserved market.

Ideas come when you realise from personal experience that there is a need for something new, something different. I've travelled a lot during my career and I'm familiar with the feeling of being abroad, but wanting to know what's going on at home.

Moreover, my personal circle of friends includes many expats who've chosen to relocate to Europe. They've come from India, Korea, China and elsewhere. But their shared desire to see the world, to experience living in a different culture, has led them all to start new lives in Europe.

But something else my friends originating in foreign lands have in common is their desire to retain links with home, even to watch their favorite TV channels from their native country.

For decades diaspora populations – people of the same nationality or culture located in countries other than their homeland – have been able to access programming from their birthplace in numerous ways. But these kinds of language-based TV channel bouquet services usually were not professionally managed or attractively packaged. Also such services in years past were frequently associated with piracy.

But in the intervening decades the pay-TV industry has changed dramatically, and even more recently, the success of Netflix has been a game-changer. For the first time, people today have widely come to use and understand words like "streaming" and to adopt the vocabulary of new kinds of TV services including over-the-top.

Meanwhile other new-era companies like Amazon have raised the standard for service and speed, and have consequently redefined consumers' expectations for retail services across the board. Everyone now expects more from their entertainment provider, a greater variety and quality in programming as well as a much more seamless and easy-to-manage subscription process.

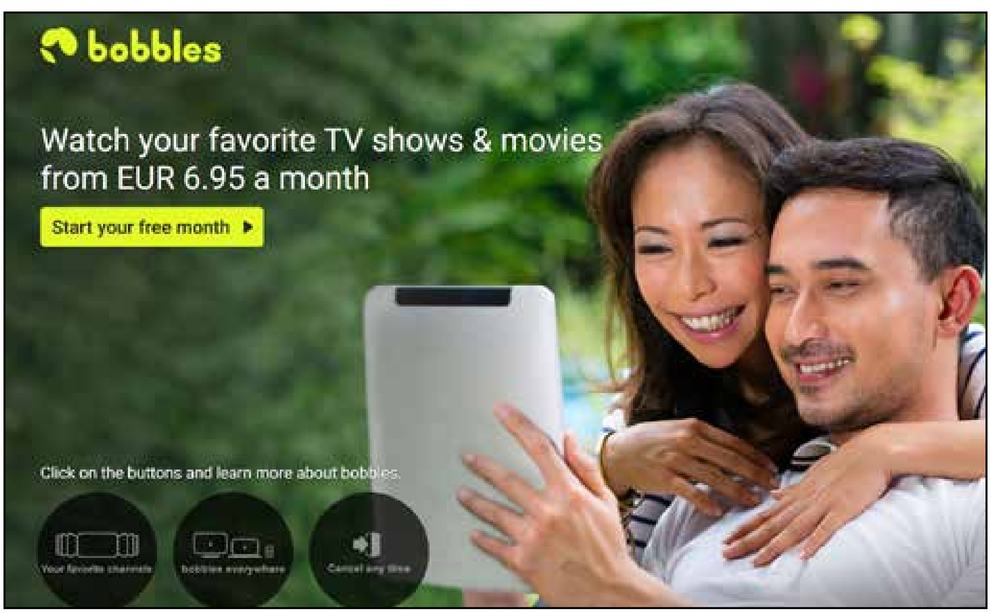
Arnold C. Kulbatzki, founding Partner and CEO, bubbles Media GmbH, has over 20 years' professional experience as a manager in the media and telecommunications sector. Prior to establishing bubbles media GmbH in January 2016, he was the CEO of a2b media, a management consulting firm with extensive expertise in customer experience management, digital transformation, paid content and OTT services.

My professional career in the television business has always been driven by taking the customer's point of view, asking what kind of services get people excited? How can you deliver a level of quality and convenience that people are willing to pay for, and importantly, what is the pricing "sweet spot"?

My Bubbles Media partners and I imagined there must be a way to create a business built around delivering multiple packages of programming to the many people from all around the world who have chosen to call Europe home.

When our research revealed there are well over 14 million people originally from Asia, Latin America and Africa but currently living and working in Europe, we knew we had a potentially great business opportunity – and an idea that would really delight a huge number of people, including our friends.

Thus bobbles.tv was born.

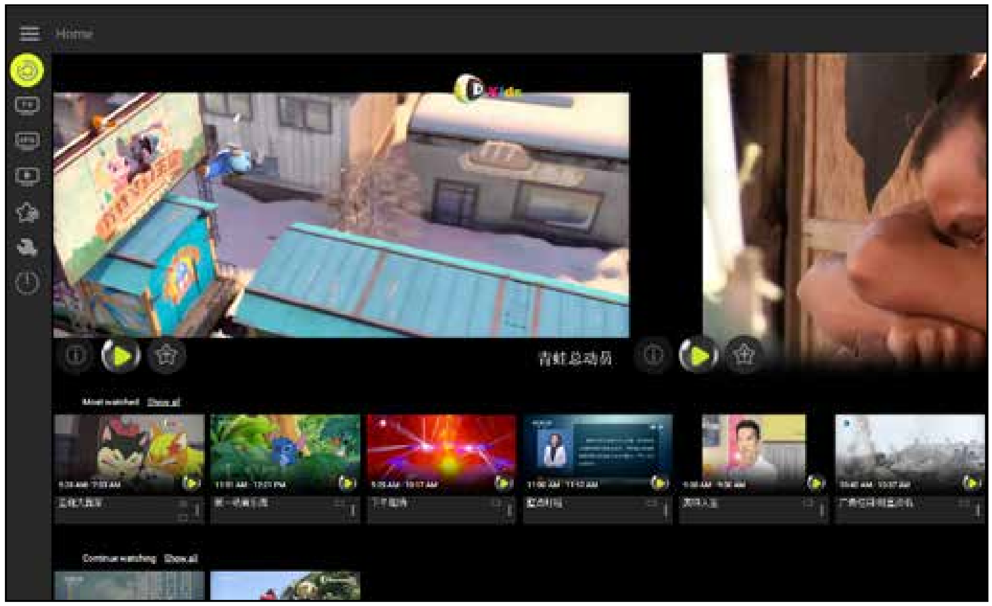


bobbles.tv offers international communities ways to watch their tv favorite shows.

What is bobbles.tv?

bobbles.tv delivers channels from around the globe. Our service can be received throughout Europe via satellite and online. bobbles.tv offers international communities a convenient way to watch their favorite TV channels, live or on catch-up.

For us it was important to pair the bobbles.tv OTT streaming service with the reach of direct-to-home (DTH) satellite broadcasting. Certainly in Europe, if you want to truly engage with people located right across the region, pan-European satellite is really the only way to go. We realised that combining OTT with DTH would yield the best of both worlds and enable us to build our business based on universal Europe-wide reach, including areas where there is no or limited broadband.



boobles.tv designed its user interface to be highly usable and engaging.

Choosing the right technology partners is business-critical

We knew that for the widest possible satellite reach, choosing SES was a no-brainer as the worldwide leader in beaming top TV programming straight to the living rooms of millions.

The long-established track record of its broadcast subsidiary MX1 gave us huge confidence that a multiplatform OTT-and-satellite service could be seamlessly co-ordinated and would deliver the highest quality of service to all our viewers.

Among the most important requirements for bobbles.tv was to ensure that the service was both engaging and highly usable.

We knew of the great work that next-generation TV specialists TeraVolt, based in Hamburg, was doing in service design, and their team delivered a platform with a superb look-and-feel that would appeal to people of different cultures and languages.

3 Screen Solutions, an innovative software developer based near Stuttgart, had been gaining a reputation internationally for creating apps and front-end interfaces that engage viewers across multiple screens. We wanted to ensure bobbles.tv subscribers would benefit from the flexibility to watch on multiple devices, whether they were at home or on the move.

3SS delivered customised apps for web, iOS and Android, and other intuitive enhancements that help viewers easily discover content, with interfaces that make accessing and watching that content a great user experience.

Highly professional technical integration with key backend functions including DRM, content and language management systems, payment platform and user management operations was a particularly important accomplishment as we headed towards our launch.

Launching a multi-language international service on a pan-European satellite system simultaneously alongside an innovative new service via OTT was an amazing accomplishment in terms of technology and process co-ordination.

In preparation for launch, regular international project team conference calls involved engineers, designers, satellite and online distribution technicians and other specialists from all of these partners, as well as our own in-house team. Typically there were 15 or more participants dialling in from various countries – all working together, sharing their expertise and creativity, and the common goal of making bobbles.tv satellite and OTT service a success, for us and for our audiences.

Getting the pricing and subscription processes right

It was critically important to determine a price point for a new service like bobbles.tv that would make choosing the alternative route of piracy uneconomic.

Broadly speaking, in Europe, we know from experience that people are fairly willing to pay 10-15 euros (US$11-16) for this kind of language-specific package. And this pricing level also allows the service provider to run a viable business.

One of the biggest challenges that any TV provider faces is consumer reluctance to commit to a long-term contract. Viewers also want an easy sign-up process and a hassle-free unsubscribe option. bobbles.tv subscribers only pay for the programming they want: A single subscription enables viewers to access the most popular channels from their home country.

Monetization opportunities today and tomorrow

In addition to attracting viewers with our simple, no-nonsense subscription formula, there are additional monetization opportunities.

The channels included in our various international packages benefit from the bobbles business model. For some channels, our platform is their first foray into the European region.

Joining a platform like bobbles.tv is a powerful yet highly resource-efficient opportunity to reach the millions of people comprising diaspora communities. For a channel located thousands of kilometres away from Europe, via our bundled channel offerings, we give broadcasters a chance to reach new audiences without needing to invest in expensive marketing campaigns or engage in complex licencing operations.

They don't even need to worry about the transmission costs because we undertake that investment. For many broadcasters working with bobbles.tv is all upside, and they appreciate these benefits.

Other revenue opportunities going forward include video-on-demand. And of course as soon as your subscriber base reaches a critical mass, we can offer a great – and, in fact, unique – business opportunity for advertisers.

In August 2016 we went live with Chinese and Indonesian packages, and before year-end, we launched offerings for Korean and Vietnamese communities. A huge milestone as we embark on 2017 is the imminent launch of our packages for consumers originating in India and Pakistan in February.

I'm exceptionally proud of the feedback our customers give us. They go out of their way to tell us how enjoyable the service is and how easy it is to use. They proactively suggest what channels from their homelands to add, all of which encourages greater user engagement and retention. Additionally, the social media tools we've integrated help users be more involved in our product while enabling them to connect with each other.

All along, we wanted to ensure that bobbles.tv was not just an à la carte menu of linear services. We really wanted to deliver a world-class personal TV experience, enabling linear and catch-up TV, with true PVR functionality such as search and backwards EPG, enabling a subscriber to access a programme even if they missed it.

What we have learned on our journey

What has been the biggest challenge along the way? To make what on the surface could seem like a complex offering really easy to understand, navigate, pay for and enjoy by people from all over the world.

I have learned that it's important to keep an open mind in every way. I once thought that you could simply do everything via the cloud. But in order to deliver a high standard of service you need to put in quite a lot of work, including raising your knowledge about all kinds of technology disciplines.

When all of the many talented technical and creative people who contribute to the service are sitting around the same virtual table you have to do everything you can to help ensure that they are speaking a kind of common, unifying language. This could have been a major obstacle as we planned our launch but we successfully overcame it thanks to the professionalism of the people we have chosen to work with.

I have learned a huge amount about the different cultures that comprise our highly diverse audience base, and I've learned a great deal about how people live, do business, and how their experiences differ. This has been a significant and highly satisfying learning curve. Taking bobbles.tv from imagined concept to reality has been, and continues to be, an unforgettable personal journey of which I am immensely proud and thankful.

My best advice to other people thinking of launching an OTT service is to never, ever forget the viewpoint of the customer. Bobbles.tv viewers don't necessarily miss home every day, but they want to keep their connections, and being part of something bigger, alive. It feels great to be a part of that.

At the end of the day OTT TV is just like any other business – there's no mystery formula. If your product has the right quality, service level and pricing, you will have a successful business.

The service has not been operating long, only since August 2016, so we don't have much in the way of scientific consumer satisfaction data. What we do know from our early focus group tests is what subscribers tell us – they like our website, they think the service is friendly, and they find our user journey simple, intuitive and easy to understand.

My advice to any prospective OTT service provider is, if you think that you have an idea worth trying, if you think you have something that will enrich people's lives, try it. I can guarantee that it will take more time, energy and imagination than you think. But the rewards and personal satisfaction make every moment of it worthwhile. And it's also a lot of fun. □

Customers can watch their favorite programs from around the world.

Achieving ROI with OTT
Strategy, Monetization, and Product

By: Jon Keller

Content creators, publishers, and brands are looking towards new trends of distribution, leveraging over-the-top video streaming as a way to reach their audience in new places. The big question is when can you expect a return on your investment? The simple answer is; it depends.

Strategy

It should come as no surprise that the very first and most important step to a successful OTT strategy is content. The statement "content is king" still holds true today. Without quality content to both draw and retain an audience, achieving ROI on your efforts becomes exponentially more difficult.

Once the hurdle of producing or acquiring content is behind you, next steps should be laying down a solid marketing strategy. With the current fragmented ecosystem of platforms, this isn't a "build it and they will come" scenario. An extremely important aspect of achieving success is dependent upon your ability to attract and reduce user churn within your OTT offering.

The most successful marketing strategy that we've seen resembles a funnel. At the very top, you have your least engaged audience on social platforms like Facebook and YouTube. These viewers will represent the largest portion of your audience; however, they're also the least engaged. Once a viewer finishes watching a particular video, chances are the next one they are served is not yours. This absolutely helps expose viewers to new content; but again, it's the exact reason why this platform can't be your end-all be-all solution.

Moving down the funnel, we get into a deeper level of viewer engagement, which would be platforms such as Vimeo or even a web portal for your content. The viewers that make it here are more engaged and will likely be exposed to more of your own content instead of more of someone else's.

At the bottom of your funnel you have by far and wide the most engaged viewer, who's immersed in your own branded applications. These viewers are more likely to purchase a subscription service, watch advertising, or even pay for a piece of content.

Monetization

Companies that successfully drive people down the engagement funnel into their own branded ecosystem have to decide how to monetize their offering. There are three primary monetization strategies; AVOD (Advertising), SVOD (Subscription) or Transactional (TVOD).

Advertising can be effective in building large audiences. However, it also requires these large audiences to be effective. Subscriptions are a more straightforward offering, in that you're charging a monthly or yearly fee of "X" and the math associated with being profitable simply comes down to the number of users who you're able to get to pay for your offering. Lastly, transactional allows you to sell through videos, series, or seasons. This tends to be the most difficult form of monetization due to the fact that without extreme brand or content awareness - viewers are less likely to purchase content a la carte.

The most successful strategies tend to be hybrids, allowing viewers to watch ad-supported free content with the option to upgrade to a subscription and remove advertising.

Product

When looking at how to achieve ROI with OTT, it largely depends on what you've invested into deploying your solution. One of the larger expenses tends to be the technology itself which begs the question, build or buy?

There are countless examples of companies who have attempted to build out their service internally, and wound up abandoning their efforts and purchasing more of an off the shelf type service. Likewise, there are plenty of examples of companies successfully building out their own service. However, in these scenarios - achieving ROI generally occurs much further down the road.

The most important thing you can do with regard to product is choosing a platform that allows you to get to market quickly while also being extremely flexible from an integration standpoint. Choosing an "end to end" solution leaves very little room for negotiating or swapping out components such as an online video platform, ad servers, even a subscription or paywall service and thus results in vendor lock.

When it comes to making decisions on how you'll get to market, monetize, and achieve ROI with your over-the-top streaming service the simple answer is—there is no simple answer. □

Jon Keller is the VP of Platform Sales and Marketing for Odd Networks, an over-the-top (OTT) platform. His passion surrounds helping companies navigate and understand the online video space while enabling them to launch their own branded streaming services on devices such as Apple TV, Roku, and more. He's a cord-cutter of two years and strong proponent of change within the traditional broadcast models.

Best Practices

Why Local OTT Is the Biggest Opportunity in Media

By: Christopher Pappas

American business is littered with examples of companies that knew that they needed to evolve but did not or could not change their revenue models. The combination of changes in technology and consumer habits has decimated companies and sectors from Eastman Kodak, to Woolworths, to Lucent Technologies to name a very few. Companies that fight the tsunami of changing technology and consumer habits by holding on to their existing revenue models is a story that we are witnessing in the broadcasting industry today. To their credit, many people have predicted the demise of broadcasters and the sector has consolidated, successfully defending their revenue models from new technologies and increasing their payments from multichannel video programming distributor (MVPDs). However, the OTT future of streaming video is here and broadcasters don't have the resources to adapt to this change. Due to this, the opportunity for innovative local video services to fill this void is one the biggest opportunities in media today.

Yokal Sports uses a revenue sharing model to monetize local sports.

Problem Statement:

Broadcasters have done a great job the last few years defending their turf. However, there are too many changes buffering today's video space for them to adapt. Just a few the problems they are currently witnessing are the following:

1. Social Changes – Today's viewers are not watching the 23 minutes 55 second news cast at 5:30 pm. As we know, consumers want their video on demand, with quicker segments, in their social feeds and new platforms and have the ability to share with friends and family.

2. Cable Unbundling – As the cable unbundling continues to occur video companies will need to have a direct relationship with customers. The existing broadcasters do not have this relationship and are not looking to build it. They have chosen to fight with the MVPDs over rates rather than building direct to consumer options for their news and video operations.


Christopher Pappas is the Founder / CEO of Yokal Productions. Yokal Production's first brand is Yokal Sports and the company has covered over 100 games for schools sports in 3 DMAs, created the Yokal Sports Sports Report and will be expanding in 2017.

3. CPM Advertising – As technology companies continue to drive down CPMs, local broadcasters will have to deal with a lower advertising rate. While that doesn't affect Google or Facebook due to their scale, it will become a problem for stations that can't compete at scale and are suffering from declining CPM rates.

4. Costs – Broadcast stations have been around since the 1930s and with that comes legacy costs. While they have reduced costs, an average station in a top 20 market costs around $15 million to operate per year. This cost structure is just too high compared to what a lean start-up would be able to do.

5. Corporate Affiliate Structures – As digital platform deals are being executed, they are not able to include local stations in many markets because they are not owned by the same company. Therefore these platforms are not including stations in their offerings and thus allowing a new company an opportunity to become the local brand for digital.

Local content, such as high school sports, is an untapped opportunity.

Opportunity:

Due to the above reasons, local OTT offers a dynamic opportunity for new companies to solve these problems. As someone who has been working on this for a few years, our company has developed ideas that any company who wants to work in this space can benefit from. The below ideas represent the ways new companies must execute to become successful.

1. Innovative Revenue Models – Companies in the OTT space must think differently about all aspects of their business. Taking existing cable channels and just moving them to these new platforms is probably not the best way. Everything needs to be different and the most important thing is revenue. CPM advertising will not work because the audience is too niche to justify large advertising buys. Therefore, at Yokal Productions we are focusing on creating customers. We are starting with enterprise customers who are legacy media companies and digital platforms where we syndicate our video and receive revenue shares. We are syndicating different video packages that have audiences and sales teams where we get a revenue share of the money that is generated. As we expand to over 10 DMAs, we will do a direct-to-consumer option; however, the best way to start is to focus on existing companies that will make money from our video.

2. Different Production Strategies – A successful local video company must be both bottoms up and top down. That means any person can be a reporter for you and get paid if they successfully send in video. Additionally, the company needs to polish this video and make sure it's consistent and high quality. It is important to be a production company that also ingests user submitted videos. Being a bottoms up/top down local video service will allow for a company to cover more events, inspire more people, and keep costs low.

3. Verticals – Video companies today need to focus on filling a niche in different verticals. As media and video have evolved it's important to be good at understanding people's passions. Whether it is cooking, food, politics, sports etc., companies today need to focus on categories. When covering local it's even more important to provide quality local video services in different verticals. For example, at Yokal Productions we are focusing on sports and covering school sports in multiple markets.

4. Low Costs/High Scale – A local video service needs to be very lean by using new technology and allowing users to submit different video formats. Additionally, companies must be able to execute in multiple markets. Each market needs to be profitable quickly to justify the costs of covering games and events. By being a low cost, high scale video service a company can take these two business fundamentals and become successful.

Local OTT is a large and dynamic market opportunity. People care about where they live and are looking for quality local video content to educate them on what is happening locally. The challenge is to think completely differently about what a local service does and how it generates revenue. □

Trends & Anaylsis

The Future of Television Is Not OTT

By: Gabe Greenberg

2016 brought a very strong year for monetization of television and video with record upfront, newfront and scatter markets. Was this a fluke resulting from an election and Olympics year, or will monetization of video and TV remain strong? This is a question many CMO's, Chief Investment, and Chief Media Officers are grappling with as they consider strategies for 2017 and beyond.

To answer this critical question, we must first look at the macro economic and business factors that are influencing media spending in TV and video. To do so, it is important to level set on the definition of TV, as its planned and bought today. The GABBCON working group has defined television as a programming feed that is packaged, created and distributed through various delivery means to various devices – this may include a TV set, a mobile device, gaming console, PC or tablet. It's important that readers understand this distinction and definition of TV as we further explore the trends impacting the medium.

Despite claims made nearly weekly by those in the digital ecosystem that TV viewership is down (TV based on the above definition), TV is at its height with some of the best content and viewership ever. In fact, networks like HGTV and Food Network are recording record ratings. We do however continue to face a scarcity situation with TV with finite content and audiences to target. Certainly, with time shifted attention, the audience is now consuming TV on many screens, many of which are not properly measured by Nielsen or others. This lack of measurement currency and standards leads to the ongoing hype by those in the digital ecosystem, whose hopes are that if enough buzz and fear is created about decline of TV that their digital products will win the day. So with viewership up (across all screens), record numbers of original shows being created, and time shifted attention, is the future of television going to be OTT or Video? The future of television is going to be television – distributed on all screens that consumers choose to consume it on. Profound? Not really.

Brands like Coke-Cola still value TV.

Therefore, if TV viewership is up and marketing leaders and agencies are trying to push dollars from TV to digital, what is the fate of TV and TV monetization?

There have been several research studies that suggest the elimination of TV in a media plan has negative impacts on brand lift, brand recall and sales. In a recent report published in late 2016 by TiVo and 84.51 entitled "Decreased TV advertising spend hurts sales" 15 CPG brands partnered with A&E, Turner, TiVo and 84.51 to understand whether a decrease in TV spending will impact sales and if the hefty cost of TV is worth the investment. The research indicated unequivocally that brands should not consider cutting TV. In fact, for every $1 saved or not spent in television, brands lost $3 in sales. The report states "Cutting TV budgets may seem like an easy way to save money, but as this study shows, brands stand to lose more in sales than they stand to gain in media savings. Accordingly, maintaining a significant level of weekly effective reach is a key driver of ROI, and brands need to keep those factors in mind as they consider budget allocations."

Brands and agencies alike are being scrutinized to deliver more return from every media dollar spent. For TV to reclaim some of the dollars lost to digital,

Gabe Greenberg, CEO and Co-Founder of GABBCON, has over 20 years of sales and marketing leadership expereince. A passionate leader and outspoken advocate of the Advanced TV marketplace, Greenberg serves as Global Audience Based Buying Conference and Consultancy. As a recognized expert on digital media and marketing, Mr. Greenberg has been featured in AdAge, AdWeek, BBC News, Biz Report, iMedia Connection, & MediaPost and has spoken at premiere industry events in North America and Europe and is an active Coleman Research Group Executive Forum Member.

TV must continue to deliver on what it does best, build brands and deliver sales. TV must however also catch up with digital to allow for more index, audience based and addressable buys at scale. This sounds easy and obvious but the infrastructure to deploy addressable, index and audience buys at scale simply does not exist today. Most providers have their own technical infrastructure or audience definitions that make it difficult to cobble together buys at scale. There are groups working to develop open standards to solve for this, but the industry must come together to create an open and secure infrastructure that allows for common audience segments, inventory and audience targeting.

Walled gardens will not create the scale and simplicity needed to effectively monetize TV and therefore, it is important that broadcasters and cable networks not fall into the walled garden moat (or trap) that their digital siblings have. Some good examples of inventory providers innovating to more effectively monetize TV inventory using programmatic, audience based or index buys include NBC Comcast Universal, Fox, Hulu and Roku.

Because of the great work Roku has done, MAGNA has just doubled down on their TV investment with Roku. David Cohen, President at MAGNA talked about the importance of reaching the time shifted and attention shifted TV viewer. “We’re continuing to diversify the mix, transcending audience demographics while leveraging data in a new way through our partnership with Roku. They offer the most sophisticated OTT advertising path to reaching customers,” said Cohen. “By integrating advanced ad technologies directly into our TV operating system, Roku is able to offer advertisers the most advanced ad capabilities in OTT,” said Scott Rosenberg VP of advertising at Roku.

More will follow in MAGNA’s footsteps by not only continuing to commit meaningful dollars to television, but they will also bet big on new distribution channels for TV including Roku, Crackle, Hulu video on demand and TV everywhere products offered by broadcasters, cable networks and MVPDs. I am willing to bet that so as long as we define TV as we have above, dollars that have begun to migrate away from linear to digital budgets will return as brand and agency leaders recognize the power of television to deliver sales, brand awareness, brand lift and brand recall.

For those of you talking up the hype or betting on the death of TV, or the future of TV being OTT, do not hold your breath. TV will regain its power position as new and improved targeting, index and audience based buying scale and as measurement of viewership on new screens and devices catch up. There is a reason why billions are spent on TV and why brands will continue to bet on TV. In fact, you can look past all the research and just listen to leading CMOs like Coca Cola Global CMO Marcos de Quinto who said ““TV still offers the best ROI across media channels.”

2017 is a great year for television.

Content Monetization: Creating Great Experiences in Less than Great Environments

By: Julia Dimambro

I'm British and I'm very lucky to be living and working in an utterly beautiful part of Spain, about 30 minutes south of Barcelona and around 15 minutes inland, slap bang in the middle of a natural park.

I'm overlooking the sweeping Catalan mountains as I write this. I hit the working day early and the sunrise has just started to do the same over the tops of the mountain peaks and bounces off the different winter hews of the trees and foliage to create a kind of magical glittering light in the frosty morning. It really is beautiful.

However, everything comes at a price and the chances of me being able to finish this article without my broadband (yes, you heard me right - broadband in 2017, folks) cutting out at least once will be a miracle.

As you can imagine, this causes no end of frustrations when settling down in front of Netflix, my IPTV box for UK TV, or any other Internet-based service. As a result we often have to revert to just watching Spanish TV via our antenna, which (trust me) leaves a lot to be desired in terms of premium entertainment!

I set up a mobile content licensing business back in 2003, on a dial-up connection and in a bedroom of my parent's house. They had recently retired to Spain and I had returned to Europe in haste after leaving my job and apartment in downtown New York in the aftermath of 9/11.

From day one, the content I could sell was totally limited by the technical restrictions of this new entertainment channel. We had to format videos to a standard called 3gp, videos couldn't be longer than 15 or 30 seconds and the maximum file size possible was only a few hundred bytes, not even a megabyte.

Having read many of OTT Magazine's great articles, it seems to me that the broadcast industry is facing similar challenges today as we did back in 2003. We have all this great content, but the customer experience is compromised because of the technical capabilities of the networks and CDNs.

Julia Dimambro, founder of Seriously Fresh Media, has spent the last 19 years in digital marketing & communications. Dimambro founded her first company, Cherry Media in 2003, a multi-award-winning, content licensing specialist that delivers great entertainment experiences on mobile devices. Earlier in her career, Dimambro launched the first interactive division of the London ad agency, J. Walter Thompson and was later voted one of the "Top 50 Most Influential Executives in Mobile" every year from 2005 to 2009. She was also awarded "Outstanding Contribution to Mobile Entertainment"at the 2013 ME Awards in London.

And going back to my idyllic location, Spain is considerably more advanced than many other wide open emerging territories like India and Africa where the vast consumer thirst for streamed digital entertainment is quashed by network AND device capability.

Of course we all know it WILL happen eventually and the tech will catch up with the entertainment innovation and customer's viewing shift to digital – in the same way it did with mobile.

We are a far cry already from only being able to watch a 15 second 3gp on our mobiles. But as a video content licensor, my commercial strategy has always been to ensure sustainable revenue growth during these transitional periods to new platforms, which in this case is a robust, reliable OTT experience. I've done this by adapting and even creating content specially tailored to the consumer's

Living in a beautiful, remote area may come at the cost of quality broadband.

OTT requires a new generation of content for mobile, web TV, VOD, Smart TV and IPTV.

natural behavioural patterns within said devices as well as the localised technical capabilities of the region, platforms and networks.

My company, **Seriously Fresh Media Ltd**, distributes video content worldwide for all platforms. We work with our clients to understand both the localised and cultural requirements for the content, but also the technical and even regulatory legal restrictions of each specific country or region. In a nutshell, we aggregate global content for localised needs, so we work with producers all around the world for specific languages, local trends, long or short form, etc., and then our in-house team will both edit and encode the content to offer the absolute maximum user experience possible with the technical capabilities available for that client.

Given that OTT is by its very nature a much more personalised experience than linear broadcast and that audiences can be segregated into far more targeted viewing habits and tastes (thanks to single viewer devices), the requirement for localised content strategies is combined with the need for more niche and specialised channels.

I appreciate that this is not always viable in terms of the top 10 or so OTT channels, but for the wider, more localised services, it delivers a way to offer quality customer experiences and generate income for all parties in the value chain in order to prove the commercial models and justify the necessity for further investment into technical development.

As we've learned in the past with mobile, if you have a 30-minute program, but you can only offer customers a 5-minute video because of network issues, then other factors come into play for content planning. For example, the type of content you can offer, how you present that content contextually and the environment in which that content is sold.

All of these factors can effectively support any lacking technical capabilities. We call this digital retailing and in mobile we saw it increases conversion rates on Pay Per View videos by up to 30% (back in the day).

Given that OTT is by its very nature a much more personalised experience than linear broadcast and that audiences can be segregated into far more targeted viewing habits and tastes (thanks to single viewer devices), the requirement for localised content strategies is combined with the need for more niche and specialised channels.

The other important factor about content for OTT is content snacking. A combination of the bombardment of choice combined with new viewing habits of the millennium generation means that sitting down in front of the family TV to watch a feature length movie is decreasing. I don't think it will ever go away – hopefully the social factor of entertainment viewing like this will help keep it in the matrix, but to a) obtain and b) engage the new audiences, video snacking is an important factor to consider for any OTT platform. It requires a strategic blend of long and short form content and a well-planned navigation system to target browsers and searchers, snackers and couch potatoes, etc.

Bottom line? It seems to make sense that the inherent broadcast-originated OTT industry combines its strengths with the native-born digital entertainment experts to help ensure hitting the sweet spot between tech and content, now and in the future.

And the good news is that I had not one network outage whilst I wrote this – it must be a good omen for OTT!

Best Practices

OTT Puts the Power in Consumers' Hands: Risks & Opportunities Abound

By: Virginia Juliano

Consumers in the Driver's Seat

The days of "set it and forget it entertainment" are officially over. Now more than ever is the age of entertainment choice for consumers and this has created a dynamic where consumers are more apt to reexamine their entertainment choices and reconsider their OTT subscription and usage decisions on an ongoing basis. While this is good news for consumers, it sets up a situation where customer churn has become more of an issue for OTT providers.

Due to the constant new entrants into the space, the ease of canceling or modifying services (checking a box online as opposed to getting on the phone with a call center), and an increased technology comfort level, customers periodically reevaluating their mix of entertainment is on its way to becoming the new norm. Therefore, understanding and harnessing consumers' hot buttons will become more of a focus as the OTT heats up in 2017.

Points of Risk (and Opportunity)

Long-term cable contracts, limited choices and plain old inertia have been the staples of the television industry. These elements translated into somewhat complacent, if not dissatisfied, but basically trapped and powerless customers. But with the new amount of consumer control, here are some potential triggers for picking up share or a battle for retention, depending on where you sit:

• **Pricing**—Perhaps the most important perceived OTT benefit to consumers is cost. According to a recent Wall Street Journal article http://www.wsj.com/articles/cord-cutting-could-cost-pay-tv-industry-1-billion-in-a-year-study-says-1475071214, the average cord-cutter saves $104 a month -- or about 56% of their bill—from dropping cable and piecing together their own "meta-bundle". With that much at stake, it can certainly pay for consumers to keep on top of pricing.

Understanding and harnessing consumers' hot buttons will become more of a focus.

Virginia Juliano is the Founder & CEO of CobbleCord (www.cobblecord.com), a free website and App that helps consumers cobble together a personalized combination of paid and free OTT services, cut the cord and stay on top of their streaming selections. Prior to launching CobbleCord, Juliano spent a decade as a marketing executive at Showtime Networks.

Varied and oft-changing price points alone are a major reason consumers are kept on their toes regarding their OTT setup. Promotional price periods or free trials coming to an end are cause to reexamine if a service is still worth it. Because the payments are often buried in credit card statements, OTT costs may not be as top of mind as that cable bill that arrived in the mail every month. But that's no excuse to rest on laurels, as there are plenty of other touchpoints that prompt consumers to question the value of their OTT arrangement.

Of course, a price increase is another opportunity for consumers to take a good hard look at whether or not a service still maintains its value. For instance, Netflix saw a drop in subscribers and slower growth following its $2 monthly increase from $7.99 to $9.99. On the flip side, discounts and holiday offers are also something consumers keep on the lookout for. A discounted offer at the beginning or end of a show's season

One of the biggest challenges for OTT is determining subscribers' willingness to pay for new content bundles.

makes it more likely for consumers to pull the trigger on an OTT show or service that they've heard about.

• **Content Rights**—In the OTT world, content rights are constantly shifting. Every month there are a slew of titles that roll on and off each OTT service (and there are tons of websites that highlight these changes). Sometimes a chunk of content may no longer be available due to contract expirations (e.g., when Netflix lost all of Discovery Channel's content a while back; and more recently, when PlayStation Vue lost Viacom's programming roster). Consumers may find that an important motive for originally subscribing to or downloading a service may no longer be valid, leading to a regroup.

• **Seasonality**—Cancelling a subscription at the end of a show's seasonal run and/or subscribing/re-subscribing when it begins again is a behavior that premium channels have long had to wrestle with. The same holds true in the OTT world. In fact, even more so, since a lack of long-term contracts and packaged bundles makes it easier for consumers to pop in and out of a service at their discretion. Calendar-wise, summer vacations, winter holidays and sabbaticals are also flashpoints for customers questioning what's actually necessary in their entertainment stack. It's also a ripe time to push those on the "cord cutting fence" over to the non-cable world.

• New Services & Content—The proliferation of OTT services has led to a lot of great programming and the firehose of high-quality content just keeps on gushing. Yet there are only so many hours in the day to watch (an undoubtedly first world problem, to be sure). Whenever a new OTT service launches or compelling new content becomes available, consumers have a stronger inclination to streamline their choices by sun-setting some old standbys that they don't use as much to make room in their viewing schedule. Culling and rejiggering OTT subscription combinations also helps consumers surface and discover the most current and relevant choices out there for their particular interests.

• **Oversubscription**—In an effort to duplicate their cable subscriptions, new cord cutters often oversubscribe to (and hence overpay for) OTT services. Sometimes an adjustment period is needed to understand their true needs, after which they realize that they are not watching the myriad of services they initially subscribed to enough to warrant the cost. Scaling down an all-you-can-eat buffet approach in favor of a more customized and curated one can save money and reduce 'content clutter'.

Seizing the Reins

As more consumers cut the cord (or a least seriously consider the option), they will also become more comfortable playing an active role in managing their entertainment – although they may be somewhat reluctant to do so at first. After all, the "lean back" pleasure of zoning out with your favorite television show may not jive with the idea of keeping an ongoing eye on the many dynamics of the streaming ecosystem. But getting the most from their entertainment dollar is a powerful motivator and companies who bring the most value to consumers and help them navigate the chaos will be the winners.

Home entertainment is now an ongoing series of evaluations, not just one static decision, and warrants an always-on marketing approach. Although this new reality creates an ongoing scramble to win and maintain share and manage churn, it can also keep the OTT space vibrant and fresh, with ever-shifting opportunity. And that's good news for everyone. □

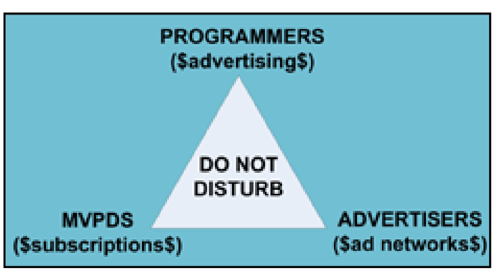
Streaming Media is Stuck in the Muck

By: Mark M. Myslinski

Consumers want the experience of streaming everywhere and all the time. However, these consumers haven't given up on live/linear programming, and the current ratings support that notion even for Millennials. In this case, there is no live/linear streaming currently that can be delivered with consistent high quality and that's when the audience scales.

The streaming industry struggles when it comes to live/linear programming, particularly at scale or high resolution-especially 4K. When you combine these factors, scale and resolution, the streaming industry just can't do it. Part of the issue is the reliance on conventional CDN technology, and part of that is its reliance on the Internet as an unmanaged network.

In addition, the industry is struggling to yet make money for over-the-top (OTT) streaming services. Here's what Dan Rayburn had to say in his 2016 year-end comments: "OTT is growing, it is expanding, but the business side of OTT is still unproven for most. The number of live streaming events in 2016 was probably a record, but most of them lost money and could only afford to be streamed due to a big financial backer. We are a long way still from being able to monetize live streaming WITH profitability and still have more work to do."



The monetization "power" triangle.

Now let's consider the apparent lack of motivation for streaming live/linear programming by the "power triangle" of the programmers, MVPDs and the advertisers. This triangle of constituents is resting on their current multi-billion dollar laurels characterized as follows:

First, they have a very tight albeit, highly-profitable triangle generating tens of billions of dollars in subscription and advertising revenue. Second, they aren't loosening up their cable packages now or apparently any time too soon. And third, the programmers are currently generally satisfied with their TV Everywhere (TVE) distribution and MVPD relationships therein.

This power triangle is a most complicated web of rights and relationships which are tenuous to unwind without too quickly opening the dam of eyeballs and losing control of the current advertising outlets and revenues.

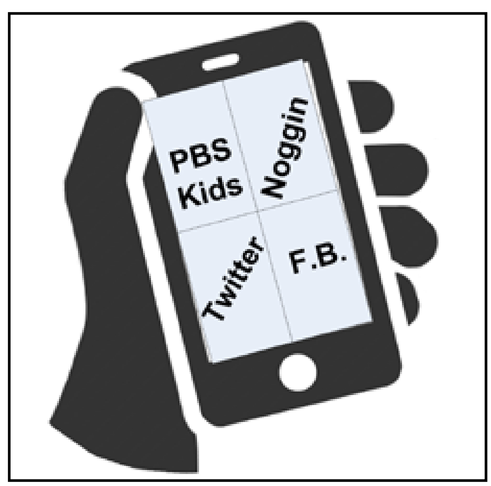
Consider that streaming of media today is largely based on streaming "video." Yes, we have a few ads here and there and even as interstitials, but it's still basic video at this point. This today is facilitated by conventional CDNs which have physical limitations of fixed terrestrial networks and a finite number of edge locations. And more questionably their reliance on the Internet. The Internet? Really? How could we possibly talk about broadcast of anything live/linear, and even just "video" to any large audiences with these types of limitations?

The business of "television" is a mashup of live, linear, on-demand and advertising. Now further combine that with blackouts and program substitution. Then coat it all with distribution rights of which live, linear, on-demand and, even advertisements, all are subject to having their own set of distribution rights. I'll sum it up and say that conventional CDNs have significant structural limitations in supporting this complex mashup of what we call "television" and the streaming thereof. Overall, the point here is it's time to move on. The question is, is the industry ready to move on? To answer that question, we have to look at what the consumers are demanding.

Mark M. Myslinski, OpenVideo Consulting, is a 15-year veteran of the digital cable television industry, with over 6 of those years in the streaming media industry. Most recently focusing on streaming media distribution and the challenges associated with live/linear programming. His latter experience has been in association with new generation and hybrid content distribution networks, most recently various study of ATSC 3.0 and the next phase of opportunities in the Broadcasting industry.

1. Get the Goals Up to Date

What consumers demand today is fragmentation of programming and entertainment that can be combined for their own personalized consumption. They want live/linear and on-demand



"Skinny bundles" promote fragmentation.

programming, simultaneously with personalized Internet content and applications and all of this synchronized at times. They want it anywhere not just in the home. This fragmentation starts with "skinny bundles."

Ultimately there's the business of building audiences and making money. The effective curation and distribution of content by a major broadcast agent will require streaming broadcast television as a direct-to-consumer relationship, combined with Quality of Experience (QoE) analytics to enable a constant re-application of more personalized content along with targeted advertising.

At such a point, when the content providers can stream live/linear television anywhere including personalized Internet content and targeted advertising, there lies the making of a far superior consumer experience. This would be superior for content providers as they could parley their existing large broadcast audiences into increased advertising outlets based on as many demographic categories as a web-based target could unearth, and as the advertisers can keep up with.

The true golden goblet is for broadcast programmers to deliver a QoE that maintains the viewer's engagement within a live/linear large-scale event. This should be done in such a way that interstitial advertising can be sold and delivered throughout the programming event without consumers ducking out during the event due to a poor-quality experience.

In the excerpt below, notice how Accenture talks about the broadcast programmer's opportunity to assert brand advantage, which could be leveraged by the major broadcast programmers or be made anew from the next generation of streaming services providers who assert themselves and their technology.

Consumers want skinny bundles now to make their own bouquets of content.

"Crucially, our research shows that incumbent operators have an opportunity to dominate the new video content marketplace – provided they play to their strengths. Consumers place far higher trust in these organizations' ability to deliver quality content and support for video-over-the-internet services. But if they don't act now, they risk wasting this valuable brand advantage. The new generation of disruptive digital players may still be less trusted brands, but they're purpose-built for a digital world where people are increasingly likely to consume video content via IP-connected devices other than the TV." [2]

And that was in 2015. Many might say this is easier said than done, but there are options for achieving these goals if we just get out of the current streaming muck.

2. A New Distribution Network

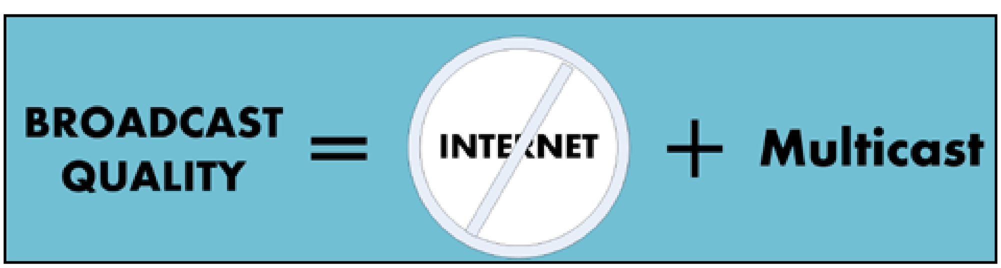
The Netflix-style streaming business works pretty well, and more often than not, very well. This is done with conventional CDN technology combined with efficient placement of caches.

First there is live/linear video, and beyond that streaming of full-blown "television," of which certainly for the latter, the investment into conventional CDNs with multi-layer caching infrastructures appears to have diminishing returns. Particularly as "television" which conventional CDNs have never been architected for. Yet we've seen the effects of these diminishing returns when CDNs try to do video or worse yet "television" at scale.

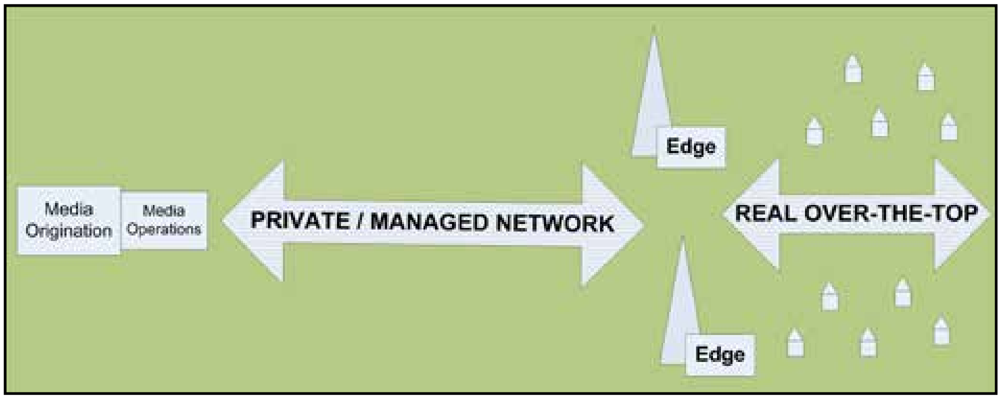
In terms of Quality of Service (QoS), the ability to deliver the overall experience, we have appropriate options today. For starters, why do we not use multicast in the long-haul / middle mile to the edges? Broadcast = multicast in an IP world, is the most practical and cost-efficient means in this realm.

Satellite can do this. Satellite is the obvious example of the most cost efficient means to distribute broadcast media point-to-multi-point and in this case directly to the last mile ISPs. Granted, a satellite- based IP multicast service for OTT distribution is not off-the-shelf today, but the technology to do it is. Satellite networks can provide the most globally distributed network of distribution points and more ubiquitously than any other type of network on the planet.

Take a look at the over–the-air (OTA) broadcast industry and ATSC



Broadcast quality is limited by multicast technologies and the underlying network.



An ATSC3.0-powered OTA network could become a game-changer for OTT service providers and consumers.

3.0. In 2017, ATSC 3.0 will empower the OTA broadcast networks to deliver both on-demand content and linear origination from locations unimpeded to the consumers, namely as these will have reliance neither on primarily the Internet nor a mish-mash of third-party last-mile providers. ATSC 3.0 networks will be able to multicast broadcast content to make the distribution service truly scalable as well as able to distribute 4K content efficiently.

ATSC 3.0 has adopted ROUTE/DASH for delivery of DASH-formatted content and non-real time data, and the MPEG Media Transport (MMT) standard which inherits major advantageous features of MPEG- 2 TS for the real-time streaming delivery via a unidirectional delivery network. [3]

Combine these with the major Broadcasters having a backbone of tower locations, tens of thousands of tower locations in the United States alone. Most importantly these locations represent the absolute "edge" closest to the consumers which could facilitate processing therein. So literally and figuratively an ATSC3.0-empowered OTA network could become a very powerful new OTT network.

3. Virtualization Key to New Workflows

Both of the examples given are based on improved "edge" locations, yes, the very same edge that conventional CDN suppliers so dearly try to replicate and place closest to the consumer. The same edge where companies like Netflix locate caches for the very same reasons. It's clear to the industry today that the closer the content or linear origination is to the consumer, the higher the QoE and QoS for the consumer.

Previously, location of content, origination, video processing and other workflow elements nearest to all consumers has not been cost effective as these elements have been sourced by manufacturers largely as appliances (i.e. dedicated hardware and software). But today as a result of virtualization technology, the hardware expense (capex) can be made minimal. And the QoE and QoS can be delivered via software and subsequently as opex (i.e. pay-as-you-go).

This shift from largely capex to largely opex makes embellishment of edge locations closer to the last mile networks both practical and cost-efficient. These include IaaS, PaaS and SaaS (get your cloud dictionaries out). The beauty of virtualization is that as the market changes, so can the infrastructure.

4. Time to Make that Leap

We start by re-marking the goals we really want to achieve. Fragmentation of programming and entertainment for personalized consumption, made up of live/linear and on-demand programming, simultaneous with personalized Internet content and applications and all of this synchronized at times.

And within this, meeting the demand for live/linear "television" and enabling that same high revenue- generating interstitial advertising to be now exploited with Web-based targeting technology.

We then leverage some very current and new generation technologies already in our hands. For starters, we use multicast in the long-haul distribution to efficiently get content and linear origination closest to the consumers. This combined with using cloud-based technology and workflows to leverage the currently thriving market of IaaS, PaaS and SaaS providers.

As an industry we can't wait for the major programmers, MVPDs and advertisers in its power triangle as it is not to be disturbed until further notice. Consumers want skinny bundles now to make their own bouquets, and there are a growing number of sources of programming and content that can be used to begin to satisfy this consumer demand-for now or at least until the sleeping giants decide to roll over.

Now is the time to embrace wholeheartedly the next generation of OTT distribution technology to enable consumers to build their bouquets of programming, content and entertainment that satisfy their current demands. And with that, those lucky content providers will be able to embark on this new world order and get the ball rolling with the golden goblet of quality broadcast, large audience, live/linear programming and targeted advertising-muck-free and achieve revenue generation. □

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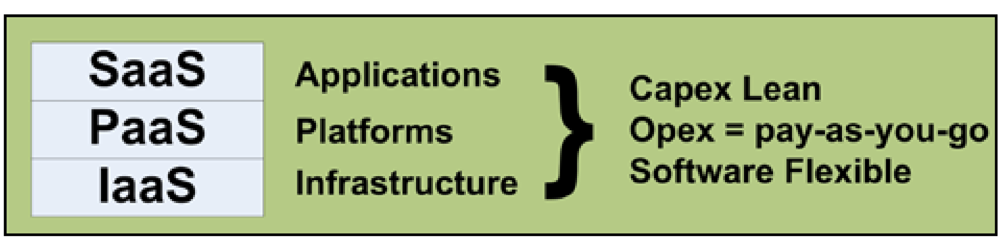

Virtualization of all layers is key to new streaming media workflows.

Executive Insights

TV for the Everywhere Generation

By: Ivan Verbesselt

The "Everywhere Generation" has taken over and is a vast group that extends beyond age groups. This is a generation of forward-thinking consumers who expect no limitations in how they consume content. They utilize a vast array of devices to watch their TV content. This includes traditional screens, as well as computers, smart phones and even watches – whether they're at home, in a coffee shop or on a plane.

With this limitless access to entertainment possibilities, it would be naïve not to recognize that emerging technology has fundamentally altered our relationship with TV. Two hours of video are uploaded to YouTube every minute from mobile devices. Although this shift does mean that TV viewing has decreased by 38 percent among 18 to 24 year olds between 2011 and 2016, it doesn't mean the "Everywhere Generation" has abandoned TV altogether. They're often just approaching it in a different way.

As for television's place in this new world order, it's also important to note that while Apple once claimed, "The future of television is apps," this assertion is limiting. Apps obviously play a significant role in the content equation, but they're just one piece of the broader TV landscape. Viewers love their OTT streaming capabilities, but they also crave their live TV and their modern TV services. This includes HD/4K quality, catch-up TV, start-over TV, social TV and searchable and recommended content.

The upshot is that as long as television and pay-TV providers adapt to this demographic's "no limits" approach, there is still a vibrant market for their products and content.

Still, TV providers must be proactive in dealing with the market, because SVOD services do present a real platform threat to traditional TV. In fact, experts predict that by 2020, SVOD will account for 20 percent of viewing time and 10 percent of global pay-TV revenues.

To figure out how to move forward, TV providers need to truly understand where there are inefficiencies on the landscape. Most notably, as a growing number of "Everywhere Generation" members are pulling technology from column A and column B to tailor how they consume content, they are frustratingly saddled with a fragmented array of apps and devices.

This can cause mayhem. From TV to SVOD services there is a fight for the HDMI1 spot. Viewers are forced to toggle between TV inputs, using multiple remotes, cords and other gear. Many simply can't remember which app or PRV service to access in order to watch their favorite program. This disjointed environment leads down the inevitable path to bad user experiences.

The key question providers must ask is, why pick and choose when it's possible to have it all through a single provider you know and trust? Solutions do exist that deliver a single coherent experience with a single management environment across a single network filled with all the programs and videos consumers have come to expect. In other words, pay-TV providers can assure even the most discerning members of the "Everywhere Generation" that they'll connect them to the content they love, and do so in a seamless manner.

One essential way to succeed on this front is offering a single UI that delivers a simpler, integrated and seamless TV experience with a user-friendly interface in one device, regardless of content type. Pair that technology with cutting edge features like elegant hardware and touch screen remote controls that work flawlessly with ergonomic user interfaces and consumers will be drawn to those products.

Ivan Verbesselt is Senior Vice President Group Marketing for NAGRA. Previously, Ivan was Vice President in charge of Alcatel's TV business otherwise known as Information, Communication and Entertainment (ICE) after having led the Product Marketing and CTO office of Alcatel's DSL business. Ivan holds a Master of Science in Applied Physics and Electronic Engineering from Brussels University and an Executive Degree in Business Administration from Solvay Business School (CEPAC). He is a seasoned industry speaker and has also been active as a guest professor in Marketing at the International University in Geneva.

At the same time, there must always be an eye on content offerings. Statistics show that the desire for SVOD doesn't mean viewers want to give up traditional pay-TV options. According to IBB, 57 percent want to combine television and SVOD services. Embedding this ability into any product is a must.

Mixing the old and new by integrating "traditional" pay-TV packages with OTT offerings enhances the customer experience and maintains one point of contact for customers. Success stories like Netflix and Spotify are important reminders that consumers are willing to pay for quality content. Similarly, time spent on the Internet is driven by video, which is so often inspired by TV. As a result, we must remember that so much of what the "Everywhere Generation" enjoys online can still be found on television with the added benefits of an unmatched user experience.

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Executive Q & A

The Many Challenges of OTT: Fragmentation, Duplication and Navigation

Interview by Brian Mahony with Thomas Engdahl, CEO Vidillion

In this interview, Brian chats with Vidillion's CEO, Thomas Engdahl, regarding the many challenges of OTT.

Brian: To introduce our readers who may not be familiar, please tell us a little bit about Vidillion and your focus in the industry.

Thomas: Thank you for the interview Brian. Vidillion founder Dennis Nugent and his team are very early adopters of IPTV and thus OTT. I'm excited to have joined them as the President and CEO. Vidillion is a one stop shop for video advertising monetization. We maximize content-owners' revenue by mediating between different ad networks, then optimizing based on dollars per second of ad duration rather than $/CPM. This results in a higher "fill" rate, and more money in the content owners pocket per viewer hour. Vidillion's approach is a proven model allowing our customers the maximum value for advertising time. Vidillion handles millions of CTV ad inventory per day in multiple languages across all devices. Last month, we delivered ads to viewers in 120 countries - almost half the world.

Brian: Since your focus is on ad insertion and programmatic advertising, can you please share with us the business case for why customers would want to invest in those technologies?

Thomas: The first point is that customers don't invest in Vidillion technology, we invest in their content by monetizing their channels by supplying optimized advertising. Our Ad Exchange monetizes content channels by connecting their ad inventory with demand. For each individual ad channel ad break, our patent-pending software collects all available information about the content, ad break length, device, viewer and their location, then determines what demand is available to fill that request, and finally builds an appropriate ad pod for the request that will maximize the VSP's revenue. Our business model is a revenue sharing situation where we provide the infrastructure and take a piece of every ad we provide to channel ad breaks.

Thomas Engdahl, CEO of Vidillion, is a Senior Operating & General Management Executive with a proven track record of delivering consistent, measurable, shareholder and market value through decisive leadership, product innovation, problem solving and team development. Engdahl has served as President and CEO of a number of companies as well as other key positions. He holds six patents for telecommunications and video-cable products, and has been active in setting standards in the telecom industry since 1984.

Brian: SVOD is growing a lot and seems to be taking up a larger share of OTT business models for all types of service providers. This is primarily because consumers inherently dislike their content being interrupted by ads. What is the future of advertising in regards to new forms of television and video entertainment? Is there something about OTT that makes advertising based business models more or less attractive?

Thomas: SVOD is taking share but it's not clear that SVOD is all that different. My Comcast account allows me to stream content to my mobile devices. Is this OTT or SVOD? The subscription model versus the advertising model has been around since the introduction of HBO in the early 80s. Viewers will pay for certain content and expect to watch advertising in other types of content. The OTT industry has passed the infant stage

What does Vidillion's crystal ball tell us about the future of the OTT industry?

and has now entered the adolescent stage, and as it continues to evolve we will see multiple avenues for content revenue generation. A good example of the evolution is the concept of pre-roles, or ads at the beginning of a show but not during the show. My point is there is room for both models.

Brian: So everyone knows the user experience has become very fragmented because of the various OTT services and devices. At the same time content discovery has become a very difficult challenge. How do you see this challenge being fixed and is there anything your technology can do to help solve the problem?

Thomas: It is indeed personal. People do business with people. Vidillion believes in programmatic advertising— the more we can provide relevant advertising to the viewer, the more effective the advertising message will be to the viewer. The more effective the content is, the more valuable advertising becomes to the brands. We are working on a programmatic advertising solution which will combine a number of technologies and data points and allow us to be very specific in our viewer targeting.

Brian: If you look inside your crystal ball, how do you see the OTT market evolving in the next five years? What are the top trends that will shape the future of the industry? Is there any advice you can share with our readers about how to focus on the important things to help them grow profitably?

Thomas: The OTT market is growing and continues to enable viewers to "cut the cord." As I look in to my out of focus crystal ball, I see the OTT segment of the television market growing at a rapid pace. At the same time, I see fragmentation, duplication and navigation to be the pins which could burst the OTT bubble. Fragmentation: when you have thousands of individual channels providing content for every subject matter genre, the viewership for each channel cannot support the cost of providing and maintaining the channel. Duplication: the same content playing on multiple channels again creates a viewership problem and as such a monetization problem for each of the channels. Navigation: discovery of channel is difficult at best, and with thousands of channels the problem grows. If a viewer does not know a channel exists, advertisers are hard pressed to trust it as a means of reaching their target audience. Across the next five years, Vidillion is setting its sites to crack the code by addressing the pins I just mentioned. For me, it's exciting to play a role inside broadcasting's evolution and to also see what has lasting value over time. □