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Video Distribution Strategies in a Broadband-centric Future

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1. Billy's Mom

While 11-year-old, Billy R. from Rock Hill, SC played soccer, his mother was just settling down to watch an on-demand movie at home.

The coach gave the kids a break and told them that practice would end an hour earlier than usual. Billy sent his mom a text message that instantly showed up as an overlay on the flat-screen in the Living Room. Billy's mom grabbed her handheld to answer.

Ten minutes later, she jumped in her car to pick up her son. Arriving a few minutes early, she continued to watch her movie on her handheld device—right from where she paused it back in her Living Room.

When they arrived home, Billy headed straight for the flat-screen to play a quad-split first-person shooter with three kids from other countries. Mom finished watching her movie in the kitchen—full screen on her PC.

This is one of a thousand use-cases cited by the proponents of the "What I want, where I want, when I want" media consumption future. WiwWiwWiw (pronounced wee-wee-wee) foretells a time, in the not too distant future, when everyone will live in a broadband-centric, interoperable, on-demand content universe.

Service Providers (SPs) have a tremendous amount of opportunity in a broadband-centric universe. There are at least three potential revenue streams: subscription services, advertising and transactions. Plus, SPs will benefit from the power of wireless networks, the value of location-based services and the true convenience (and behavioral changes) technology will afford connected consumers.

2. Consumer Media Consumption Paradigm

Globally, each market has a unique media consumption focus. Parts of Asia are mobile phone-centric; others favor PCs; still others are predominantly populated by television viewers. In Europe, satellite and cable are much more evenly split than they are in the US. South America has a remarkably small paid-television consumer base. But, no matter where you look, no matter what market you visit—where there is broadband connectivity—the media consumption paradigm has changed.

Over the past few months, consumers have demonstrated preferences for various types of vide consumption, including: "video snacking", "download-to-own," "online video," and video applications. The adoption of these preferences combined with the advent of technology has helped the Internet quickly evolve into a media-centric environment.

2.1 Consumer Video Experiences

2.1.1 Video Snacks

Video snacks are a new art form which evolved in parallel with the social networking phenomenon. In general, video snacks are short and low resolution. They are extremely inexpensive to produce, or have been appropriated

completely free of charge by the person who wishes to share them over the Internet. The short durations of video snacks make them difficult to monetize with traditional television advertising units. Consumers generally will not watch :15 seconds of advertising for each :45 seconds of online content.

2.1.2 Internet Television

Internet Television is a television-like experience over the public Internet. You can find examples of Internet Television at abc.com, nbc.com, cbs.com, and fox.com. In fact, almost every major television network offers some kind of online viewing experience for their most popular shows.

Many believe that the limitations of the public Internet are simply antithetical to the distribution of high-quality, emotionally satisfying images to millions of simultaneous users. They are wrong! Live streaming capacity over the public Internet is equal to all but the very biggest shows in primetime. John Edwards, CEO of Move Networks, thinks that 10 million simultaneous users are easy and that we can expect capacity of 20 million simultaneous streams in the near future.

Although, there is a clear distinction in terms of video consumption behavior between video snacking and Internet Television, there is a fairly homogenous continuum between both. Video content comes in a plethora of subjective and objective quality levels, resolutions, lengths and subjects.

This video content does not have a name that everyone agrees upon. Most people just call it “broadband video” or “online video.” For our purposes, which is simply to silo a piece of video content to a particular value chain, we can take short form videos and call them “video snacks” and longer form pieces (which can be advertiser or subscription supported) and call them “online” or “Internet” television. The important issue is not what to call the content, the issue is how the content is monetized now or may be monetized in the future with the advent of technology.

2.1.3 Download-to-Own

Download-to-own is a well-understood consumer behavior. iTunes, Amazon-On-Demand and other download-to-own (or rent) services operate under the assumption that consumers will be willing to pay for files, download, store, and then view them. Of course, digital files are hard to protect from piracy. People with more money than time, buy and people with more time than money, pirate.

Download-to-own is often spoken of as “the” form factor that will replace DVDs for long-form and evergreen video content. This may well be the case. The question is, “when?”

2.1.4 Video On-Demand (VoD)

Whether it is video snacking, Internet Television or download-to-own, recent observations of the changes in video consumption lead to one overwhelming conclusion—consumers like to consume video content and, most importantly, they like to be in control of their media consumption experiences. This consumer trend shows significant inclination towards on-demand consumption. So, for SPs, VoD has the potential to be the “killer app.” However, it must evolve.

It is worth noting here that the technology used for the first generation VoD product was poorly designed from a business perspective. The idea that people would rather press a button and watch a movie than go to a video store was good—but the value chain was flawed. The market price for a PPV movie was too low for Studios and too high for consumers. And, without an intelligence layer, the system could not evolve to deliver television-on-demand or even help promote appropriate content based upon viewer behavior.

2.1.5 Video Applications

Lastly, it is important to consider video applications that are also having a significant impact on consumers (webcams) and businesses (video conferencing). As travel becomes more and more difficult and expensive, you can expect two-way video applications to approach ubiquity in broadband environments.

Video is everywhere and it is being produced and consumed at record levels. Video is becoming more personal, more interactive and more social. Both production and consumption are trending upwards and will continue to do so indefinitely.

3. Service Providers Today

The consumer media consumption paradigm is changing at an ever-increasing pace. And, the Internet is evolving into a media centric environment. However, on the SP's side, the media distribution paradigm is not changing anywhere near as quickly. This supply and demand mismatch is responsible for much of the angst SPs feel as they try to compete for today's media-hungry consumers. The good news is that most SPs across the globe have taken the step to upgrade their network infrastructure to Next Generation Networks (NGN).

SPs know that their infrastructures have to be ready to meet bandwidth demands and that their service offerings must be bundled to reduce churn and increase revenue. However, as a highly-placed executive at a major US SP said, "The technology for a fully integrated multi-platform system exists. It needs to be productized." This is precisely the problem. Right now, there are literally hundreds of different products and services that are very appealing to consumers. They create a great deal of value, but so far, very few organizations have been successful converting that value into wealth.

3.1 Media Centric Environment Challenges for SPs

SPs face real challenges creating profitable businesses out of this consumer-controlled video consumption paradigm. Video snacks are hard to directly monetize because they are generally too short to carry traditional video advertising loads. However, promotional video snacks and snacks that are predominantly branded content are very popular and could yield acceptable "return on advertising spend" (ROAS) with proper measurement and reporting.

In the case of Internet Television, most SPs are just spectators: watching the increase in bandwidth load on their infrastructure with no benefits to their business. In contrast, television networks are enjoying improved financial results from making that content available online. And they are making money the old-fashioned way–ad supported with traditional television commercials.

The evolution of a successful on-demand content system that would enable SPs to maximize their return on investment (ROI) is simple to predict. The system will need to know who is watching, what they have watched, and give someone the opportunity to analyze that information so they can turn it into knowledge, and then deliver customized advertising based upon that knowledge. The system will also help drive commerce and take rates by conveniently packaging content and contact across a consumer's platforms and devices of choice.

Looking at evolving consumer behavior, it is easy to predict the kinds of video products and applications that might move consumers down the purchase funnel or even help reduce churn. Today, the commercial load on linear television offerings is unacceptably high. While advertisers are still spending money to advertise on linear television, they are starting to push back about advertising efficacy.

Key insights into the future of profitable video distribution can be gained by studying advertising efficacy on Internet television. Publishers have demonstrated that you can accomplish a great deal by creating scarcity (reducing inventory) and increasing relevance by using full episode Internet television players. The next logical step is the ability to deliver a targeted audience at a premium price. It will be a fundamental building block of any future service offering.

As competitive infrastructures are built-out over the next few years, bits have a very good chance of becoming a pure commodity. The goal of a properly crafted infrastructure should be to increase or, at least, hold on to the value of each bit served. SPs will accomplish this by adding both applications and content to their service offerings. The content will need to know how to find its audience and report back that is has done so.

3.2 The Challenge of Technology Is As Good As Business

Will Billy's mom watch her movie in three places at once? What role will technology play in making this vision a reality? How will systems evolve and interoperate? The answer to all of these technology questions requires the answer of one, important business question: How will the SP business model evolve?

Is there a profitable, interoperable future? If there is, it will start with formats, standards bureaus and other trade groups agreeing that consumer aspiration for interoperability will make good business sense. Enabling cross-platform features is not a technological hurdle. It requires a meeting of the minds and some business rules.

The proper intra-industry business model will help manage margins for every SP. This makes sense no matter what economic conditions prevail. A cooperative business model is a very likely cornerstone of any sustainable future model for monetizing video content.

4. Unique New Experiences—Opportunities for SPs

In a media-centric broadband world, service offerings will have to include more than on-demand content. Although one could fantasize about a lot of new, interesting ways to productize media, service providers don't have to work that hard. The best ROI is more likely to come from adding small conveniences that help the user experience (UX).

Although we may delight in the thought of Billy's mom being able to watch a movie in three places at once, the technology required to enable it would be instantly profitable if the system simply knew what on-demand movies she had already watched and, more importantly, what kind of movies they were. This would empower the SP to use addressable and dynamic messaging to sell her more content, or recommend new programming choices.

What services are already being sold to Billy's household? Do they have the triple play? Is the video provider also the mobile phone provider? Dynamicism and addressability could be put to excellent use to drive adoption of additional services.

From the pure UX perspective, the same database would enable an intelligent on-demand user interface (UI). This may be one of the most important applications of the technology. Automation and Artificial Intelligence (AI) cannot take the place of human program directors, but a tool set that puts both automated recommendation and human filtering in place would truly offer the best of both worlds.

> *The importance of the "cool" factor cannot be overstated. If the experience is remarkable, consumers will consume.*

WiwWiwWiw implies an allocation of time by the user. In a fully programmed, linear environment, all of your programming choices are made for you. The only choice you have to make is whether or not you wish to watch. According to most industry research, that decision takes under 60 seconds for an entire evening's worth of programming. One way to improve the experience for an on-demand consumer may be to create hybrid recommendation and barker systems that combines the best of AI, the best of UI and the best human program direction available.

4.1 Personalization and Interactivity

Personalization does not mean interactivity in the “old school” sense of the word. Many people like to describe a future where everything on the screen is clickable or where personalization comes in the form of “choosing your own ending” to a drama. No!

A good way to think about personalized media experiences is to look at how people use and consume their media today and imagine how you could use technology to make the experience better. This is one of the few cases where you can use yourself as a “focus group of one.” Think about the way you use the grid guide on your television. Is that always the best way to find what you want? How about the mosaic interface? Does that make more sense with some types of programming? It doesn’t take long to train yourself to think about personalization from a consumer’s point of view. If people only spend an average of 60 seconds thinking about what they are going to watch for an entire evening, how would you re-imagine the presentation of media choices to fit within the limited time window and yet, yield better results for an on-demand consumer? Enabling and empowering consumers to consume better is the ultimate goal of this technology.

4.2 Video Intelligence

A truly intelligent video network would offer a quality of service and a quality of experience that is unavailable today. Video would look great on every screen. This is an important goal. A profitable future will be built on the back of media that is self-aware and an NGN with a significant intelligence layer.

A successful NGN would include all of the following attributes:

- Simplified encoding and transcoding
- On-the-fly resizing of assets
- On-the-fly resizing of graphic elements
- On-the-fly dynamic content (both heuristic-based and rule-based)
- On-the-fly addressability
- Global registration of users
- Standardization of content metadata
- Measurement and accountability

One could consider this high-level list a “tall order” by itself. But a true intelligence layer would also include a low-level list of attributes that would focus on ensuring the quality of UX. As a practical matter, the only time consumers ever think about audio or video quality is when they are forced, by a faulty system, to consume content that falls below their expectations. Quality control needs to be a function of the core infrastructure of any video-centric future. Lots of bandwidth (per person), efficiently used!

5. Evolving Business Models

If Billy’s mom wants to watch her movie in three places at once, how many SPs will she need? How many will she choose to have? If she purchases video, voice and data from her cable provider and a mobile phone from a telco, could she enjoy an integrated, interoperable media-centric world. Apple offers a fully integrated audio and video ecosystem including wireless (iPhones are 3G and iPhones and the iTouch are WiFi compatible). They are far and away the world leaders in this technology. But, they are all but locked out at the set-top and in the living room. To put it another way, consumers are completely comfortable carrying a high-end, video-enabled mobile phone in the same pocket as their iPod. They are happy to use the phone as a phone and a text device and the iPod for music and

video. Yes, the phone is capable of delivering the entire experience, but consumers have not given the telco "permission" to sell them the content.

Today, video in the living room is the domain of the SP, Apple products are right there, but consumers have not given Apple "permission" to be their set-top video SP. So, one probable future for an SP is to be the best consumer choice across the board. However, this level of dominance has not yet been achieved by anyone, and probably never will be.

The answer is obvious -- SPs must create an interoperable environment that welcomes competitive consumption devices. The push-back to this concept has always been monetary. You need a walled garden to preserve margin. As soon as you open up your network, you lose control. Technology can solve this problem. The model for a profitable future is a combined, virtualized video content infrastructure where walled garden offerings and over-the-top (OTT) content are indistinguishable from one another.

5.1 Driving Service Velocity and Speed To Market

If *WiwWiwWiw* is a goal, then we need a system that can truly deliver any type of video to any type of screen. This will require either a centralized or virtualized, highly reliable content library, robust, on-demand formatting and extremely efficient real time delivery. The virtualization of video content and the virtualization of services and infrastructure are key components a video-centric or media-centric future.

But delivery is really only one part of the service. The true power of a system that could deliver *WiwWiwWiw* will come from its ability to be customized (in real time) by the SP to create competitive service offerings. The obvious use of a virtualized infrastructure would be the creation of "self-serve" interfaces for advertisers and consumers alike. Reducing head count on the sales side, is just one benefit of self-serve models. Service velocity at retail would be dramatically increased if consumers could craft their own service offerings online.

Today's customers, for the most part, start their comparison-shopping by evaluating the channel selection and cost of an SP's linear video package. The next generation of customers are far more likely to base their purchase decision on the cost and value of the SP's broadband offering. A package of convenient video may become secondary as digital natives come of age. And, although VoIP is a very high margin business for cable operators, next-generation consumers are not likely to value land-line telephony the same way their contemporary counterparts do.

The challenge of converting today's college students into tomorrow's paying customers will require extraordinary attention to packaging and marketing, as well as value pricing.

> *When it comes to service offerings, "one size" will definitely not fit all.*

The *WiwWiwWiw* generation comes with a fair amount of self-importance and an expectation that their hard-earned dollars are worth more. Digital native customers will be more educated about their competitive choices and will expect a level of pre-sales and customer service that, although enabled by technology, will be all about "high touch."

Then, there is speed-to-market. With a fully deployed virtualized infrastructure, it is easy to imagine SPs creating service offerings globally at a pace that cannot be approached with currently deployed technology. Speed-to-market equals speed-to-profitability. Virtualized video infrastructure is an important way to minimize marginal costs and maximize marginal gains. One great use of virtualized infrastructure will be to craft a service offering where content can come from OTT and through the SP's walled garden—each, benefiting from dynamicism and addressability, and each, benefiting from industry standard measurability and accountability.

5.2 Realizing Revenue Streams

How will service providers take advantage of three basic revenue streams in an interoperable future: subscription revenue for content and applications, transaction revenue and advertising?

No matter how you look at it, there are only three business models: “I pay,” “You pay” or someone else pays. That’s it. “I pay” means that I am willing to pay all of the costs so that you may consume my goods or services. “You pay,” means that you will pay a fee for the pleasure of consuming my goods or services. And, “someone else pays,” means that a third party (like an advertiser or sponsor) will pick up the tab. These models can be combined, and they often are, but there are no other business models, profitable or otherwise.

Subscription revenue from linear content offerings and PPV revenue will be competitive, but relatively easy to obtain. On the other hand, advertising revenue has a significant set of challenges as audiences become more fragmented.

5.2.1 Advanced Advertising Revenue

“Half the money I spend on advertising is wasted; the trouble is I don’t know which half.”—John Wanamaker, US department store merchant (1838-1922)

This may be the most famous quote in the advertising business. And for good reason—in the black art of media planning and buying lies the tacit understanding that at least half of what you are selling your client is snake oil. You know it and they know it. And, for more than a century, it really hasn’t mattered. Brand advertisers generally look at a few metrics such as, brand awareness, lift and purchase intent and use them to calculate their ROI and their ROAS. As long as they could show positive results in these two budget lines, life was just fine. That was then. Today, selling a targeted audience to an advertiser is the holy grail of advanced advertising.

> *To an advertiser, WIWWIWWIW means: Right Person, Right Place, Right Time. The technology must deliver both to be a win-win!*

Since the advent of the Internet and the census-based, networked metrics that are a fact of web commerce, we have heard a great deal of noise about the inaccuracy of the traditional television ratings system. Advertisers, brand managers and even some online video people are all challenging the industry to throw away the archaic, sample-based rating system (like traditional “Nielsen” ratings) in favor of a “more accurate” census-based model.

On its face, this sounds like a good idea. Why would anyone want to waste even a single advertising dollar? If you really knew who was seeing your ads, you could make appropriate adjustments to your schedule and maximize your ROAS. In fact, if you take the concept all the way to its logical conclusion, you could create a class of advertising products that commanded a significant premium for delivering a more targeted audience. That’s the concept, but it is not universally accepted as a truism or a good thing. Sellers of advertising are not sure that highly targeted “no waste” advertising can be sold at a price that will make up for the inefficiencies that are built in to the current system. On the other hand, buyers of advertising are absolutely sure that they only want to pay for advertising that works.

As the cliché goes, “the customer is always right.” So, if there is going to be a highly-targeted, advanced advertising business, we need to create and standardize all of the component parts, which include:g to be an online video advertising business, we need to create and standardize all of the component parts, which include:

- **Form factor** – What are we buying/selling? 15 second spots, :05 second pre-rolls, post rolls, speed bumps, telescopes, product integration, billboard, etc?
- **Packaging** – What kind of container will it go into? Show, website, video snack, etc.?
- **Distribution** – How will it be delivered to consumers? Television, Internet, etc.?

- **Measurement** – How will we measure success? Ratings, ROI, ROAS, brand awareness, lift, purchase intent?
- **Common currency** – How will we enable trade in an open marketplace?

Of all of these component parts, only one requires absolute standardization and that is currency.

For better or for worse, Nielsen ratings are the lingua franca of the television advertising business. The fact that they are not even remotely accurate (sorry Nielsen people) really doesn't matter. What matters is that the entire industry uses the same system. For example, any television media buyer can speak to any television media seller and say, "I need 425 gross rating points against Women 18-49" and absolutely everyone in the industry will know exactly what the buyer wants.

It is the combination of common form factors, packaging, distribution and measurement that creates a common currency. And this is absolutely required if the desired result is a robust, vibrant marketplace.

Unfortunately, this system has not yet evolved on the Internet for video and it really doesn't exist for any other type of rich media experience either.

How will we, as an industry, make this happen? Well, first, we need to understand that online video is not television. Yes, both are video-based forms of communication. But, television is distributed via a closed network and online video (for the most part) is distributed on an open network (the public Internet).

Not surprisingly, the most profitable online video advertising has been single advertiser long form television played over the public Internet using VPNs containing :15 or :30 second spots repurposed from broadcast television. These shows carry about 20% of the ad load of their broadcast counterparts and they generate real cash.

This is a hugely complex issue with many pesky component parts. Unfortunately, no single media company has been successful enough online to have their particular methodology become an industry standard. The most important thing to understand about the future of advanced advertising is that it is not a problem that can be solved with technology alone – but technology is a key component to the solution!

6. SPs and Connected Consumers Evolve Together

To create a connected future, where Billy's mom can really watch a movie in three places on three different devices, the technology has to be so sophisticated that it disappears. Consumers cannot be expected to plug anything in, program anything, or even articulate their technological desires. Service offerings have to be incredibly simple to use.

To prosper, SPs must transform the media consumption paradigm with differentiated end user experiences. The most successful organizations will create networks that are intelligent and media aware. This will ensure the quality of the end user experience, but more importantly, allow it to be fully customized, measured and accounted for. To accomplish this, we will see networks with the technological ability to manage extraordinary complexity at scale. Fragmented audiences, when aggregated, become large audiences. If a robust virtual network were deployed, it would be easy to imagine virtual designated market areas (DMAs) replacing geographic ones.

And finally, the future must be profitable! Fractionalized users need to be aggregated in order to be packaged and sold. As financial reporting at the brand level starts to include the direct results of media programs, the technology of the future will empower SPs to maximize their investment by delivering measurability and accountability where none exists today.

Billy and his mom are not technologists—they are just people who want a convenient, affordable way to consume their media. They don't aspire to have the latest technology. They just want to watch *WiwWiwWiw*. The video-centric, connected future will be brought to them by SPs who can harness the power of technology to package the media in a compelling, convenient service offering that is affordable to the consumers and effective for advertisers.

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