Have you ever wondered how your analog TV ever figured out what you were watching? Was it based on those surveys posted by companies such as Nielsen[1], to be filled out over the course of a week, then extrapolating their findings to the entire country, or was it magic?

Figure i – A Broadcast Audience vs. Online Video Audience

However they did it, it's clear that the Internet has changed the way in which content owners and marketers observe and measure consumer behavior. The one-to-one link between the online provider and the subscriber has a new sense of intimacy, whether we like it or not. Some consider this direct communication to be a threat to privacy; others believe it is an untapped opportunity. Either way marketers are scrambling to take advantage of this new treasure trove of information, consolidate it, make reasonable sense of it, and then sell it for a lot of money. The better they understand our consumer behavior, at an individual level, the more they can satisfy advertisers and sponsors. This will lead to more personalized advertising, and customized recommendations, which will in turn lead to happier advertisers and more money for better content. It's a virtuous circle waiting to happen.

Consider the notion that maybe our frustrations with advertising have been due to the generalized nature of its presentation. We are accustomed to the fact that the majority of advertising we experience on a daily basis we find personally irrelevant. In fact, for internet-based advertising this conventional wisdom is not entirely true. Google's pay-per-click (PPC)[3] ads have had tremendous success over the years[4]. More specifically, advertisers using this service have a direct ability to measure their success - something which is very hard to do in print advertising. The point is that this sea-change in the observation and analysis of consumer behavior is not entirely a threat - which is often our reaction to change - but rather an opportunity for consumers to discover products they would not easily find on their own…or for that matter, even consider looking for it.

How subscribers view advertising in the context of internet video is a solid step in understanding their motivations. A user study by Ericsson[6] shows the overwhelming value of receiving recommendations from friends and family in suggesting new content. This is followed by suggestions from a recommendation engine which has been correlated with past purchasing and viewing behavior. It's also worth noting how subscribers also value social media in their purchasing preferences. Surprisingly the study shows that expert recommendations are the least trusted source. What if advertising could be valued in the same light as personal recommendations?

Print ads establish a sense of relevance by placing their ads in physical places where the most eyes will *see* it, in publications with a specific demographic, and next to articles of related interest[7]. Ads of this type traditionally measure their success based on total impressions; whether or not they were "seen" by the target audience. But relevancy reaches a new level when implemented online. This happens not only by correlating a web page with the interests of the web surfer, but also mapping the user's demographics and past behavior to the advertisement itself. For example consider advertisements related to pregnancy: A web site promoting folic acid, may determine that the user is a woman, below the age of 30 years. This may suggest that the user is already pregnant, or not yet, but is in the family planning stage. So a banner ad offering pregnancy related products could be displayed. But what if the user is a man above the age of 60, and searching for folic acid? In this case advertisements related to products which prevent heart disease may be chosen instead. Further refinements in the advertisement could be made if additional demographic and past behavioral information became available.
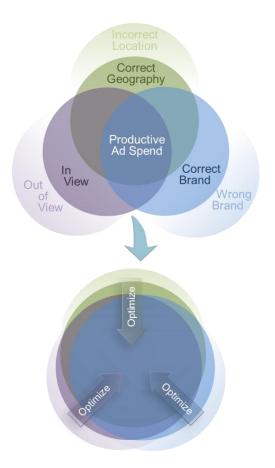
Mining demographic data against a database of products is complex combination of art and science. At the moment, there is no magic formula. It's a challenge that marketing organizations are trying to solve, in order to uncover hidden opportunities.

Ultimately the choice of print vs. online advertisement spending depends largely on the target demographic. If

the target audience is an owner of a Rolex[8], runs their own business, but doesn't own a computer, then advertising in Forbes[9] magazine may be more appropriate[10]. Likewise, targeting the 20-something[11] generation, may require focusing on Twitter, Facebook, and YouTube banner placements.

With the global nature of the internet, ensuring that online advertising is relevant requires tracking of several metrics. A web surfer from the Czech Republic browsing CNBC in the US 'may' be served advertisements relevant to their location and demographic. The following approach is based on the 3MS Initiative[12] and comScore[13]:

- Is the advertisement *in view*[14] on the target device? According to comScore, an average of 37% of ads are not in-view in the European Union[15] (EU). The location of the ad should be relevant to the target user. For example a banner at the top of a webpage maybe overlooked by a user which is focused on scrolling to the article lower down on the webpage.

Figure ii – Most Useful Recommendations for Internet Video Services

Figure iii - Productive Online Advertisement Spending

- Is the ad shown in the correct *geography* (aka. geo-location)? According to comScore, up to 7% of advertisements are served outside of their target geography. Half of these were served in the wrong language. On an international scale, relevancy is not only required on a geographic level, but also required for cultural and language significance.
- Were the ads served with the *target brands*?

comScore reports that 55% of ads in the EU were served against inappropriate brand content. A small fraction of served ads even involve fraud.

Ultimately the main question that needs to be answered is, "Do my ads reach the correct audience?" Optimizing these three metrics ensures maximum return on investment (ROI)[16] for advertising spend. Measuring this ROI is essential to justifying future advertising spending.

In the print world the cost of an ad is measured by the cost per thousand impressions (CPM[17]). National magazines may charge an average of $6 CPM, whereby TV placements would range between $10 and $35 for a popular sitcom[18]. The ultimate success of advertising is measured by subsequent revenue that is generated. But in some cases it is hard to map ROI success of an advertising campaign when other marketing & sales activities are also contributing to the bottom line.
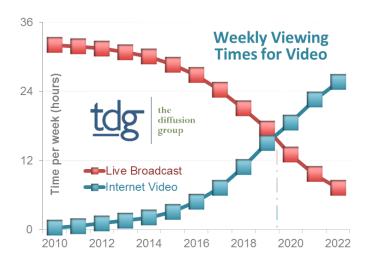

Figure iv – Weekly Viewing times for Video

Conversely it is much easier to manage the ROI of Internet advertising since the entire workflow of *prospect to client* can be closely tracked. All of this activity can even be measured and analyzed in real-time. Online advertising costs are typically cheaper as well, whether it is production costs of a short-form video, or the desk top publishing costs of a small banner ad. Some companies even save costs by repurposing their print ads and broadcast TV commercials for subsequent internet usage.

The success of online advertising can be dynamically improved with appropriate statistics and data analytics. Armed with this information, a brand administrator can pull content which isn't performing, and explore why

others are successful. Relevant questions that should be answered by an online video reporting engine include:

- Is my content any good? Is it engaging my viewers?
- When, where, and what content has been watched?
- How is the content being consumed, and on which devices?
- Which content is selling the most or the least, and why?

The overall health of the global advertising industry has been analyzed by companies like ZenithOptimedia[19]. From their study Internet based advertising is the only medium showing consistent double digit growth over the past six years (the growth in 2012 was 15%). Internet advertising actually surpasses all other advertising types in overall expenditure, except for television, which continues to grow at a healthy 5% per annum. At these current rates Internet advertising will exceed TV ad spending within the next 10 years. Interestingly, this coincides with a related study showing that consumers will be watching more online content compared to live broadcast within this decade[20].

Targeting consumer advertising at a personal level will be a great opportunity if it's done with privacy, ethics, and human decency in mind. At least that is our wish. Privacy issues aside, maybe one day our viewers will be pleased to see advertisements that know them well enough that they offer precise suggestions on related interests - guiding them to new products or services that they would otherwise not have noticed. *Minority Report*[21] may have depicted such a utopian advertising future as over-the-top. But if subtle enough, it may be enjoyable to buy something on the back of a personalized ad. Consumers would certainly find a new appreciation for advertising if it saved them days of researching the purchase themselves. Imagine that users would trust advertising suggestions so well, that they would regard them as highly as recommendations from friends or family. Maybe that's how advertising is supposed to work?

Read Additional Articles in this Series

I. Consumption is Personal

- http://dusil.com/2013/02/28/consumption-is-personal/

In the days of linear television, broadcasters had a difficult task in understanding their audience. Without a direct broadcasting and feedback mechanism like the Internet, gauging subscriber behavior was slow. Today, online video providers have the ability to conduct a one-to-one conversation with their audience. Viewing habits of consumers will continue to rapidly change in the next ten years. This will require changes in advertising expenditure and tactics.

II. Granularity of Choice

- http://dusil.com/2013/04/01/granularity-of-choice/

The evolution from traditional TV viewing to online video has been swift. This has significantly disrupted disc sales such as DVD and Blu-Ray, as well as cable and satellite TV subscriptions. With the newfound ability to consume content anytime, anywhere, and on any device, consumers are re-evaluating their spending habits. In this paper we will discuss these changes in buying behavior, and identify the turning point of these changes.

III. Benchmarking the H.265 Video Experience

- http://dusil.com/2013/04/22/benchmarking-the-video-experience/

Transcoding large video libraries is a time consuming and expensive process. Maintaining consistency in video quality helps to ensure that storage costs and bandwidth are used efficiently. It is also important for video administrators to understand the types of devices receiving the video so that subscribers can enjoy an optimal viewing experience. This paper discusses the differences in quality in popular video codecs, including the recently ratified H.265 specification.

IV. Search & Discovery Is a Journey, not a Destination

- http://dusil.com/2013/05/13/Search-and-Discovery-Is-a-Journey-not-a-Destination/

Television subscribers have come a long way from the days of channel hopping. The arduous days of struggling to find something entertaining to watch are now behind us. As consumers look to the future, the ability to search for related interests and discover new interests is now established as common practice. This paper discusses the challenges that search and discovery engines face in refining their services in order to serve a truly global audience.

V. Multiscreen Solutions for the Digital Generation

- http://dusil.com/2013/06/24/multiscreen-solutions-for-the-digital-generation/

Broadcasting, as a whole, is becoming less about big powerful hardware and more about software and services. As these players move to online video services, subscribers will benefit from the breadth of content they will provide to subscribers. As the world's video content moves online, solution providers will contribute to the success of Internet video deployments. Support for future technologies such as 4K video, advancements in behavioral analytics, and accompanying processing and networking demands will follow. Migration to a multiscreen world requires thought leadership and forward-thinking partnerships to help clients keep pace with the rapid march of technology. This paper explores the challenges that solution providers will face in assisting curators of content to address their subscriber's needs and changing market demands.

VI. Building a Case for 4K, Ultra High Definition Video

- http://dusil.com/2013/07/15/building-a-case-for-4K-ultra-high-definition-video/

Ultra-High Definition technology (UHD), or 4K, is the latest focus in the ecosystem of video consumption. For most consumers this advanced technology is considered out of their reach, if at all necessary. In actual fact, 4K is right around the corner and will be on consumer wish lists by the end of this decade. From movies filmed in 4K, to archive titles scanned in UHD, there is a tremendous library of content waiting to be released. Furthermore, today's infrastructure is evolving and converging to meet the demands of 4K, including Internet bandwidth speeds, processing power, connectivity standards, and screen resolutions. This paper explores the next generation in video consumption and how 4K will stimulate the entertainment industry.

VII. Are You Ready For Social TV?

- *http://dusil.com/2013/08/12/are-you-ready-for-social-tv/*

Social TV brings viewers to content via effective brand management and social networking. Users recommend content as they consume it, consumers actively follow what others are watching, and trends drive viewers to subject matters of related interests. The integration of Facebook, Twitter, Tumblr and other social networks has become a natural part of program creation and the engagement of the viewing community. Social networks create an environment where broadcasters have unlimited power to work with niche groups without geographic limits. The only limitations are those dictated by content owners and their associated content rights, as well as those entrenched in corporate culture who are preventing broadcasters from evolving into a New Media world.

IX. Turning Piratez into Consumers, I

- *http://dusil.com/2013/10/25/turning-piratez-into-consumers-i/*

IX. Turning Piratez into Consumers, II

- *http://dusil.com/2014/07/15/turning-piratez-into-consumers-ii/*

X. Turning Piratez into Consumers, III

- *http://dusil.com/2015/05/12/ott-multiscreen-digital-video-series-10-turning-piratez-into-consumers-iii/*

XI. Turning Piratez into Consumers, IV

- *http://dusil.com/2015/05/26/ott-multiscreen-digital-video-series-11-turning-piratez-into-consumers-iv/*

XII. Turning Piratez into Consumers, V

- *http://dusil.com/2015/09/22/ott-multiscreen-digital-video-series-12-turning-piratez-into-consumers-v/*

Content Protection is a risk-to-cost balance. At the moment, the cost of piracy is low and the risk is low. There are no silver bullets to solving piracy, but steps can be taken to reduce levels to something more acceptable. It is untrue that everyone who pirates would be unwilling to buy the product legally. It is equally evident that every pirated copy does not represent a lost sale. If the risk is too high and the cost is set correctly, then fewer people will steal content. This paper explores how piracy has evolved over the past decades, and investigates issues surrounding copyright infringement in the entertainment industry.

About the Author

Gabriel Dusil was recently the Chief Marketing & Corporate Strategy Officer at Visual Unity, with a mandate to advance the company's portfolio into next generation solutions and expand the company's global presence. Before joining Visual Unity, Gabriel was the VP of Sales & Marketing at Cognitive Security, and Director of Alliances at SecureWorks, responsible for partners in Europe, Middle East, and Africa (EMEA). Previously,

Gabriel worked at VeriSign & Motorola in a combination of senior marketing & sales roles. Gabriel obtained a degree in Engineering Physics from McMaster University, in Canada and has advanced knowledge in Online Video Solutions, Cloud Computing, Security as a Service (SaaS), Identity & Access Management (IAM), and Managed Security Services (MSS).

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Most Read Publications
by Rich Americans

#	Title (minutes per issue)	
1	Forbes	59
2	The New Yorker	58
3	Economist	57
4	Money	55
5	Golf Digest	55
6	Fortune	52
7	Consumer Reports	51
8	Men's Health	50
9	National Geographic	50
10	Bloomberg Businessweek	49

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