Evolution of the Gaming Experience:
Live Video Streaming and the Emergence
of a New Web Community

Nathan Edge[*]

Strategic Communications
Elon University

Abstract

The introduction of Internet Protocol Television (IPTV) into the eSports industry has caused an unprecedented growth in its viewership and community involvement. As uses and gratifications theory suggests, individuals are actively seeking out new media content that coincides with their interests. IPTV and live steams of videogames provide a new Web-specific genre of entertainment that is not available from traditional broadcasting methods. The convergence of multiple Internet technologies, social interaction and community-produced content has given birth to a web community with a vast and dedicated following of fans as in traditional sports. This research found a fast growing web community that is being actively sought out and consumed by the core 18-34 male demographic.

I. Introduction

The emergence of new technologies and competitors within the marketplace has given rise to a variety of new platforms for streaming media content targeting a wide array of traditional broadcast audiences online. Streaming allows for a new type of social TV that provides an interactive platform for audiences to engage, on a personal level, with their favorite gamer personalities. With the increase in professional gamers and their fandom, streaming platforms like Twitch TV have created a new interactive Internet exclusive marketplace that does not require traditional broadcasting methods.

The emergence of an online technology known as Internet Protocol Television (IPTV) (Scholz, 2011) has spurred the growth of a new user-generated and content-driven Web community. This new technology is the backbone that competitive online gaming (eSports) is relying on to reach users. Twitch TV is currently the platform that dominates the marketplace, attracting over 34 million unique viewers a month (All about Twitch, 2013). Twitch's easy to use platform provides fast and easy access for viewers and streamers alike, attracting hundreds of thousands of unique viewers daily on computers or smart devices. With the rise of a new web community, online platforms like Twitch TV are receiving growing attention and viewership among active participants within the gaming and eSports community. Enthusiastic audiences tune into tournaments, tutorials, competitive game play, and social online chat rooms with their favorite gamer personalities playing their favorite titles (Cheung & Huang, 2011).

Live online video-casting is the technology that the growing sphere of competitive gaming rests upon;

therefore, this research examines how this new technology has influenced the growth and viewership of eSports internationally. Furthermore, this technology has provided a social outlet for users to become actively involved within the eSports community. This research sought to analyze how live streams influence social interaction within the eSports community; focusing on the relationship between viewers and broadcasters. Lastly, this research explored the reasons why people actively seek out and tune into live streams.

II. Research Questions

Listed below are the questions that this research sought to analyze and examine through the use of secondary research:

Q1 – How has the rise of live online video broadcasting affected the growth of the eSports industry?

Q2 – How has live online video broadcasting affected how video game players interact socially with their community?

Q3 – Why do viewers tune into live streams?

III. Literature Review

In the following literature review, the author examined articles that analyzed the eSports community, its rise as a popular entertainment outlet, the unique attributes that contribute to its success, the industry's rapid growth within the United States and international spheres over the past decade, and how streaming has influenced the growth of the eSports community and its viewership.

eSports

Electronic sports, more commonly known as eSports, is the term used to describe playing high-level games and spectating of digital games in a competitive atmosphere (Hamilton, Kerne, & Robbins, 2012).

eSports consists of many game genres, including real time strategy (RTS), first person shooters, multiplayer online battle arena (MOBA) and arcade style fighting games. The eSports community is made up of professional and amateur gamers, teams, commentators, sponsors, spectators and fans (Kaytoue, Silva, Cerf, Meria, & Raissi, 2012). Similar to traditional sport players, professional gamers are especially skilled and participate in intense training regiments. Pro-gamers generate their income through tournament winnings, sponsorships, coaching fees and revenues earned from advertisements on their live streams (Hamilton et al., 2012). Online live video streaming, also recognized as social TV, allows gamers to attract tens of thousands of unique viewers daily (Kaytoue et al., 2012).

The eSports community has grown and evolved over the last 15 years. First popularized in South Korea, Internet cafes fostered an environment of competition and spectatorship as early as 1998. As time progressed, friendly competition grew into tournaments, professional leagues, teams and superstars; spectators became fans and a new web community (Cheung & Huang, 2012). Starcraft II and League of Legends (LoL) have grown to be the largest spectator sports in South Korea and some of the most established eSports communities. Television channels are dedicated to broadcasting Starcraft and LoL matches in South Korea (Cheung & Huang, 2012). Match-ups between the most skilled gamers and teams are streamed live from tournaments, which are spectated by on location and online audiences. The Global StarCraft League finals at Blizzard Entertainments gaming convention, Blizzcon, in 2011 attracted 25,000 on location viewers and over 300,000 online viewers (Hamilton et al., 2012). In addition, Major League Gaming attracted over 11 million unique online viewers in their 2012 Pro Circuit Championships held over four weekends throughout the year (What is MLG?, 2013). "These tournaments are the driving force behind IPTV in eSports." (Scholz, 2011).

eSports and Streaming

Streaming gameplay is a relatively new phenomenon that has exploded in recent years, attracting hundreds of thousands of unique viewers daily (Tassi, 2013). Twitch TV, a live video streaming platform, has been at the forefront of this success with 34 million unique users a month (All about Twitch, 2013). Stream-

ing can consist of major tournaments and events, but generally is made up of a single player or team that broadcasts its games and chats, explaining its game style and strategies and giving advice to viewers. This two-way communication fosters a unique relationship between the streamer and its spectators (Kaytoue et al., 2012). This relationship is nurturing the growth of a new Web community: eSports fans watch live streams of Internet personalities who play their favorite video games. As live stream video games get popular, watching them become an entertainment genre on its own (Kaytoue et al., 2012). This growth has caught attention of many media leaders, including Jim Lanzone, President of CBS Interactive. He said, "The eSports scene is one of the hottest trends in video, and is rapidly attracting the core 18-34 male demographic in greater numbers than any other medium or category" (Tassi, 2012).

The cumulative effect of globalization and the growth of Internet and communication technologies have cultivated a complex interface between gaming, sports, and the media (Hutchins, 2008).

Twitch TV

Twitch TV is currently the leading video streaming platform that dominates the gaming market, attracting over 34 million unique viewers a month. Twitch TV's goal is to "connect gamers around the world by allowing them to broadcast, watch, and chat from everywhere they play" (All about Twitch, 2013). Twitch TV provides gamers the opportunity to make money from their passion, while engaging them with an active, dedicated and interactive fan base interested in watching speed runs, classic games, and competitive games over the Web (Webb, 2012).

Twitch TV began as another live video streaming platform, Justin TV. As the eSports community grew and interest in video game streaming began to rapidly rise, Justin TV launched Twitch TV, "a live-streamed video game portal and community for gamers" in June 2011 (Rao, 2011). By July of the same year, Twitch TV posted 8 million unique viewers. Since its initial launch in 2011, Twitch TV has seen a 400% increase in its web traffic (Rao, 2011). According to the Emmett Shear, CEO of Twitch TV, sharing a video game experience is something that the younger generation grew up doing from their couches, and Twitch TV's service is a natural extension of this gaming experience (Tassi, 2013).

Much of Twitch TV's success is contributed to its easy to use platform. Without the need for any additional software or hardware, Twitch has successfully removed every barrier that may have previously prevented the community from streaming its gameplay (Tassi, 2013). As Twitch gains momentum, certain video game titles are starting to include access to live online streaming within their game software. The most notable of these games is Call of Duty Black Ops II, an extension of the successful Call of Duty series (Tassi, 2013).

The Spectator

The most valuable asset of live online video streaming and Twitch TV is the spectator. The spectator is defined as the person who follows the in-game experience, but not a direct participant in the game (Cheung & Huang, 2011). According to cultural anthropologist John Huizinga, spectators of a game are active participants of "play," and have adopted the values of the game-world (Cheung & Huang, 2011). Relating play to the ancient world, Huizinga describes the shift from protagonist to the spectator in the gladiatorial games. Although only a fraction of the Roman population participated in the hand-to-hand combat of the games, their spectatorship provided them with a "vicarious" experience, their feeling like the gladiator fighting on behalf of the spectators. This vicarious attitude is deeply rooted in play and can be directly related to watching video games as a spectator sport. In this framework, the act of spectating can be seen as a form of playing along (Cheung & Huang, 2011). In a recent social study, gamers prefer watching professional gamers compete and play rather than playng the game themselves (Kaytoue et al., 2012). This finding does not seem so farfetched when we examine the spectating practices of traditional sports. Similar to traditional sports, competitive video games have professional players as well as dedicated spectators. According to the Motivation Scale for Sport Consumption, people watch sports based on factors, such as aesthetics, achievement, drama, escape, knowledge, and physical skill. Even further, sport spectating is one of the remaining social outlets in an urbanized environment (Trail, Fink, & Anderson, 2003). Spectating is an active process because spectators seek out information to follow sports or sporting events closely. Those who watch eSports do it for many of the same reasons as traditional sport spectators (Cheung & Huang, 2011).

The primary difference between traditional sports and eSports spectating is that the vast majority of eSports events take place exclusively online. In addition, the community surrounding eSports is familiar

with the Internet and various social networks, such as Facebook, Twitter, Twitch TV and other web platforms similar to YouTube (Kaytoue et al., 2012). Consequently, a very specific social community embedded online is growing as a result. Within this community are a variety of different spectating personas. Of these personas, four directly impact the eSports community at large.

Firstly is *the inspired.* They are eager to play the game they spectate. Their eagerness stems from their desire to attempt new strategies or tactics learned while watching professional players. For inspired players, spectatorship serves as a catalyst that inspires them to directly play a video game.

Secondly, there is *the pupil.* They spectate to learn and gain a level of understanding of the game. Spectating serves as a tutorial that they will practice when they next log into a game. This persona is highly interested in watching the best players with the most information, which can be translated into useful in-game information that they will apply next time they log in.

Thirdly, there is *the entertained*. They tune into live streams for entertainment purposes only, much like those who tune into their favorite television show. Contributing factors to their entertainment include the spectacle, fandom, competition and excitement.

Lastly, there is *the crowd*. They spectate because of the strong communal ties associated with spectating. As in traditional sports, this form of spectators participate in the spectacle as a group and enjoy pleasure and excitement that games bring to the viewer (Cheung & Huang, 2011).

Each type of spectator has one thing in common; they watch eSports for the entertainment value it provides. Entertainment is at the heart of every spectator sport. Much of this entertainment comes from the notion of information asymmetry (Cheung & Huang, 2011). Information asymmetry is the imbalance of information between the player and the spectator. This information gap is created through game design, where one party has access to certain in-game information that another is denied. This can be seen in two of the most prominent eSports games, Starcraft II and League of Legends. In each of these games, there is an in-game design feature called "fog of war." This fog shrouds enemy territories in a thick mist, preventing opposing factions from viewing enemy players, bases or armies. However, this information is provided for the spectator, giving them additional information that the players themselves lack (Cheung & Huang, 2011).

Information asymmetry exists in favor of the player, meaning the player has information that the spectator does not. For example, each player knows his or her strategy and capabilities. This can consist of rehearsed battle tactics or power-plays that have been perfected over time. When these battle tactics go into action, the spectator can marvel at the skill of the player while taking delight in the well-executed attack (Cheung & Huang, 2011). In American football, this can be seen when coaches and players develop plays during practice or in the locker room. They know their strategy to score a touchdown, but the spectator only learns of their plan once it has been executed on the field. The excitement of watching professional players' plans unfold in real time contributes to the overall entrainment value of eSports as a spectator sport.

Spectatorship of eSports is directly related to the ease of platform access platforms after a technical leap in 2009, when "video broadcasting was possible for everybody through platforms like Twitch" (Scholz, 2011). These platforms allowed easy access for viewers, integrated with chat functions that allowed for constant interaction between viewers and streamers. This digital participation of audiences is possible because "the core audiences for eSports are people sitting at home in front of their computers and watching the stream" (Scholz, 2011). Ease access is crucial in eSports primarily because the audience is made up of young males aged 18-34 who are technologically literate (Scholz, 2011).

Social Capital

Social capital is the term used to describe the act of connecting amongst individuals, social networks and the norms of a community and the trustworthiness that arise from them (Lee & Lee, 2010). Social capital has been commonly broken up into two types; bridging and bonding social capital. Bonding social capital "refers to strong social ties delivering emotional support and understanding" (Juechems, Reinecke, & Trepte, 2012). While bridging social capital "refers to the weak social ties in which people feel informed and inspired by each other" (Juechems et al., 2012). In the framework of the online community surrounding eSports, gaming and other online activities have shown an increase in bridging social capital. In addition, some studies have shown "positive effects of online gaming on bonding social capital online" (Juechems et al., 2012). Past studies have shown that eSports and active participants in the community, such as clans or team members, foster online and offline social capital and social support (Juechems et al., 2012). In terms of online communi-

ties, "social networks, which were based in physical space before the introduction of the web, are now also located online and reshape the social relationships between individuals" (Lee & Lee, 2010). The eSports community has expressed that "the social side of gaming is important to them and one of the strongest motivators to engage in gaming" (Juechems et al., 2012). In terms of viewership, people do not only want to talk about games or directly play them, but they wish to participate personally within their community (Scholz, 2011). eSports' distinct audience is solely reached over the Internet through IPTV platforms. These platforms establish a social community that gives viewers a chance to interact and contribute to others within the eSports community. The social and interactive atmosphere surrounding live online broadcasting has led to a community-based content-generating community, which dominates traditional broadcasting methods for young males aged 18-34 (Scholz, 2011).

The World Cyber Games and Major League Gaming

In order to understand the growth of the eSports community, it is critical to examine major events surrounding the eSports industry. Major events include tournaments, playoffs or championships held in-person or online. The World Cyber Games (WCG) is a popular international competitive computer gaming competition that has been running since 2000 and continues to grow in size and popularity each year (Hutchins, 2008). Its unique combination of gaming, computing, media and sport content presents unorthodox content in a familiar presentation (Hutchins, 2008).

Similarly, Major League Gaming (MLG) is the world's largest eSports organization, made up of millions of live viewers, fans and competitors (What is MLG?, 2013). With over eight million registered gamers, MLG provides gaming enthusiasts with a forum to improve their skills and socialize through the largest online destination for competitive gaming (Taylor, 2011). In addition, MLG hosts an annual MLG Pro Circuit that features live webcast of in-person tournaments. Webcasts consist of competitive play and analysis via online streaming to community members and fans in over 170 countries worldwide (What is MLG?, 2013).

Data analyzed from the World Cyber Games from the year 2000 through 2007 indicated a gradual and continual growth in the game's popularity and involvement. In the game's premier year of 2000, there were 174 participants reigning from 17 countries with a total prize pool of $200,000 (Hutchins, 2008). In 2001, there were 389 participants from 37 countries with a total prize pool of $300,000. By 2007, there were over 700 participants from 74 countries with a total prize pool of $448,000. The World Cyber Games have experienced a continual growth and involvement from the international gaming community (Hutchins, 2008).

Major League Gaming has also seen a continual growth in its audience and participation. MLG's 2011 Pro Circuit attracted over 3.5 million unique online viewers over the course of the four Pro Circuit Championship weekends, up from 1.8 million in 2010. In 2012, their growth continued to increase, attracting over 11.7 million unique online viewers over the course of the championships, experiencing a rapid increase in live online viewership over two years. Additional growth is expected for the 2013 Pro Circuit (What is MLG? 2013).

Uses and Gratifications Theory

Uses and gratification theory "stresses individual use and choice in communication behaviors and helps explain how the media and their content can be a source of influence within the context of other competing influences" (Bondad-Brown, Rice, & Pearce, 2012). Within this theory there are several assumptions. Individuals are active participants in the media and "purposively select their media content, influenced by their motivations and past media gratifications" (Bondad-Brown et al., 2012). In addition, media competes for audience attention, selection and use. At the core of uses and gratification theory are motivations and audience activity (Bondad-Brown et al., 2012).

Applying uses and gratification theory to new online media, Papacharissi and Rubin (2000) suggested five motivations for using the Internet: interpersonal utility, pass time, information seeking, convenience, and entertainment. The use of the Internet as a one-stop convenience outlet for entertainment suggests that online video "combines the instant gratification of TV with the personal control of the Internet" (Bondad-Brown et al., 2012). Audience activity refers to the "utility, intentionality, selectivity, and involvement of the audience with the media, implying variations in the gratification viewers receive from media exposure" (Bondad-Brown et al., 2012). This idea of intentionality means that individuals share, recommend and discuss content with others. Program selectivity is at the base of uses and gratification theory, meaning that individuals willfully seek out media content they are interested in.

IV. Conclusion

The research found that eSports and the live online broadcasting that follow with it are an emerging Internet community and marketplace with a vast and dedicated following. The implementation of IPTV in the eSports industry has directly influenced the growth of its online viewership. Providing an easy to use platform without the need for any additional software or hardware resulted in a substantial increase in eSports broadcasting and viewership online. In addition, IPTV has provided an additional medium for income for professional gamers outside of sponsorships and tournaments. This has allowed for individuals to pursue a career in playing videogames, an option that did not exist five years ago.

The implantation of IPTV has also influenced how gamers interact with their community. Social engagement is at the heart of IPTV and live streams, breaking down traditional boundaries associated with passive entertainment consumption. The combination of active chat functions, an enthusiastic user base, and a community based user-generated content, coupled with the fact that this audience is only reachable through the Internet and IPTV platforms, provides for a unique social community that gamers actively seek out and consume. Live streaming eSports competitions and gameplay have grown to become a dominant media channel many males aged 18-34 would access. The interactive and social aspects of IPTV provide an unparalleled platform for the eSports community, which traditional broadcasting lacks.

Lastly, this research has shown the various factors that contribute to eSports and live stream viewership. Foremost is the entertainment value that eSports provides for users. This entertainment is based on information asymmetry, which creates a suspenseful and enjoyable spectacle for spectators. Live stream video games have grown to become an entertainment genre on their own, similar to traditional sports. Among many reasons that viewers tune into live streams are their adopting a vicarious attitude of play and their tuning in for the social aspect that the eSports community and IPTV provide. Interactive chat functions and user-generated content provide a unique social community that builds social capital among its participants.

This study shows that the evolution of technology has provided an outlet for a new type of entertainment genre that young males are consuming at a shockingly fast rate, exceeding traditional broadcasting methods. Uses and gratification theory provides a framework for why people are using IPTV and watching live streams of video games. Individuals actively seek out media content that they are interested in and can easily access. IPTV offers easy access, while eSports and live streams fulfill the entertainment value that users are looking for. The combination of convenience, entertainment and social community provide for an active and dedicated community that traditional broadcasting methods cannot offer.

Bibliography

All about Twitch. (n.d.). Retrieved April 29, 2013, from http://www.twitch.tv/p/advertise

Bondad-Brown, B. Rice, R. & Pearce, K. (2012). Influences on tv viewing and online user-shard video use: demographics, generations, contextual age, media use, and audience activity. *Journal of Broadcast & Electronic Media, 56(4),* 471-493. doi: 10.1080/08838151.2012.732139

Cheung, G. & Huang, J. (May 12, 2011). Starcraft from the stands: understanding the game spectator. *Conference on Human Factors in Computing Systems, 763-772.* doi: 10.1145/1978942.1979053

e-sport and the World Cyber Games. New Media & Society, 10(6), 851-869. Retrieved from: http://ehis.ebscohost.com/ehost/detail?sid=28dd2e64-ae3d-4893-a435-4cd590f876d2%40sessionmgr15&vid=1&hid=6&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=ufh&AN=35212091

Hamilton, W., Kerne, A. & Robbins, T. (2012). High-performance pen + touch modality interactions: a real-time strategy game esports context. *ACM Symposium on User Interface Software and Technology*. doi:10.1145/2380116.2380156

Hutchins, B. (2008). Signs of meta-change in second modernity: the growth of e-Sport and the world cyber games, *New Media &Society, 10*(6): 851-869, doi:10.1177/1461444808096248

Juechems, K., Reinecke, L. & Trepte, S. (May 22, 2012). The influence of proximity and familiarity on online and offline social capital in electronic sports. International Communication Association. Retrieved

from: http://citation.allacademic.com/meta/p551959_index.html

Kaytoue, M., Silva A., Cerf, L., Meira & W. Raissi, C. (April 20, 2012). Watch me playing, I am a professional: a first study on video game live streaming. *International Conference Companion on World Wide Web.* doi: 10.1145/2187980.2188259

Lee, H. & Lee, J. (2010). Computer-mediated communication network: exploring the linkage between online community and social capital. *New Media & Society.* doi: 10.1177/1461444809343568

Papacharissi, Z. & Rubin, A. (2000). Predictors of internet use. *Journal of Broadcasting & Electronic Media*, *44,* 175-196. doi: 10.1207/s15506878jobem4402_2

Rao, L. (2011, August). Justintv's video gaming portal twitch.tv is growing fast, TechCrunch.

Scholz, T. (December 13, 2011). New broadcasting in IPTV – the case of the starcraft broadcasting scene. World Media Ecnomonics & Management Conference. Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1997378

Sport Marketing Quarterly, 12(1), 8-17. Retrieved from: http://www.nclive.org/cgi-bin/nclsm?url=%22http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=9201286&site=ehost-live%22

Tassi, P. (2012, April). Major League Gaming Announces Partnership with CBS. Forbes.com. Retrieved April, 29, 2013, from http://www.forbes.com/sites/insertcoin/2012/04/17/major-league-gaming-announces-partnership-with-cbs/

Tassi, P. (2013, February). Talking livestreams, esports and the future of entertainment with twitch. Forbes.com. Retrieved April, 29, 2013, from http://www.forbes.com/sites/insertcoin/2013/02/05/talking-livestreams-esports-and-the-future-of-entertainment-with-twitch-tv/

Taylor, N. T. (2011). Play globally, act locally: the standardization of pro halo 3gaming. International Journal of Gender, Science and Technology, 3. Retrieved from: http://genderandset.open.ac.uk/index.php/genderandset/article/viewArticle/130

Techcrunch.com. Retrieved April, 29, 2013, from http://techcrunch.com/2011/08/11/justin-tvs-video-gaming-portal-twitch-tv-growing-fast/

Trail, G. T., Fink, J. S., & Anderson, D. F. (2003). Sport spectator consumption behavior, *Sport Marketing Quarterly*, 14(2), 98-111.

Webb, C. (2012, May). Interview: the big broadcast – twitchtv, esports, and making it big as an online gamer. MTVMultiplayer.com. Retrieved April, 29, 2013, from http://multiplayerblog.mtv.com/2012/05/02/interview-the-big-broadcast-twitchtv-esports-and-making-it-big-as-an-online-gamer/

What is MLG?. (n.d.). Retrieved April 29, 2013, from http://www.majorleaguegaming.com/mlg/about