

Association for Information Systems AIS Electronic Library (AISeL)

SIGHCI 2009 Proceedings

Special Interest Group on Human-Computer
Interaction

2009

An Exploratory study of the Video Bloggers' Community

John Warmbrodt

Haemonetics, jwarmbrodt@gmail.com

Hong Sheng

Missouri University of Science and Technology, hsheng@mst.edu

Richard Hall

Missouri University of Science and Technology, rhall@mst.edu

Jinwei Cao

University of Delaware, jcao@lerner.udel.edu

Follow this and additional works at: <http://aisel.aisnet.org/sighci2009>

Recommended Citation

Warmbrodt, John; Sheng, Hong; Hall, Richard; and Cao, Jinwei, "An Exploratory study of the Video Bloggers' Community" (2009). *SIGHCI 2009 Proceedings*. 11.

<http://aisel.aisnet.org/sighci2009/11>

This material is brought to you by the Special Interest Group on Human-Computer Interaction at AIS Electronic Library (AISeL). It has been accepted for inclusion in SIGHCI 2009 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.

An Exploratory study of the Video Bloggers' Community

John Warmbrodt

Haemonetics

jwarmbrodt@gmail.com

Richard Hall

Missouri University of Science and Technology

rhall@mst.edu

Hong Sheng

Missouri University of Science and Technology

hsheng@mst.edu

Jing Sheng

Missouri University of Science and Technology

jcs@cheng@mst.edu

ABSTRACT

Video blogs (or vlogs) are a form of blogs where each post is a video. This study explores the community of video bloggers (or vloggers) by studying the community's structure as well as the motivations and interactions of vloggers in the community. A social network analysis of a list of personal vloggers identifies the community's structure. Open-ended interviews with core vloggers in the sample provide in-depth understanding on the motivations and interactions of the vloggers. Overall, the results indicate that the vloggers' community exhibits a core/periphery structure. Such community is formed based upon shared interest and active interaction. In addition, the rich communication provided in vlogs allows for a more personal and intimate interaction, making vlogs a potentially powerful tool for business applications.

Keywords

video blog, vlog, virtual community, social network analysis, qualitative analysis

INTRODUCTION

Blogs are journal-based web sites that typically use content management tools to allow the authors to post contents on the websites (Gordon, 2006). Video blogs (or vlogs) are blogs where each post is a video. Vlogging has become increasingly popular. In January of 2005, Mefeedia, an online directory of vloggers, listed just 617 vlogs. As of August 2009, this number had increased to 27,782 (Mefeedia.com, 2009).

There are three main types of vlogs: personal vlogs, news shows, and entertainment orientated vlogs (Luers, 2007). Personal vloggers talk about or even share their life experiences captured by a video camera and are thus more of a personal media than a television show. News shows are informal newscasts on a wide variety of topics. An example of a news show is Rocketboom (<http://www.rocketboom.com>). Also there are vlogs for entertainment such as AskANinja (<http://www.askaninja.com>), or a sitcom format such as the Carol and Steve show

(http://www.stevegarfield.blogs.com/videoblog/carol_and_steve_show/index.html) (Clayfield, 2007).

The use of videos provides more freedom for video bloggers (vloggers) to express their opinions/views and to interact with their viewers more directly and interactively (Miles, 2003). Vlogging also fulfills social needs such as being connected, finding validation for one's experience and ideas, and being a producer as well as a consumer (Luers, 2007). Each vlogger interacts with other vloggers and together they form vloggers' communities.

The purpose of this research is to explore the vlogger's community using social network analysis. Follow-up interviews were also performed to understand the characteristics and motivations of vloggers, as well as how they interact with each other in the community.

LITERATURE REVIEW

Social network analysis is a powerful tool to investigate the interactions among social entities such as people, corporations, or other organizations (Wasserman & Faust, 1994). A social network consists of nodes and links, where nodes are the social entities and links are the relationships among nodes. Social network analysis allows researchers to visualize and conduct mathematical analysis on a network of social entities, and therefore understand the structure of the relationships among the actors (Wasserman & Faust, 1994).

Centrality

Social network analysis uses certain measurements to identify the important actors in a network (Wasserman & Faust, 1994). The most common measurement of importance is centrality. Individuals with high centrality have higher influence and cognition in the network. There are three widely used measures of centrality: degree centrality, closeness centrality, and betweenness centrality (Freeman, 1977).

Degree centrality measures who is most active in a network (Wasserman & Faust, 1994). This is done by measuring the number of ties to other actors within the network (Wasserman & Faust, 1994).

Closeness centrality is based upon distance between one actor and all other actors in a network. Closeness measures how easy it is for one actor to be able to communicate with others in the network (Wasserman & Faust, 1994). The fewer actors an actor has to go through to get to any other actor, the closer the actor is (Wasserman & Faust, 1994).

Betweenness centrality measures how important an actor is at bridging the gap between other actors in the network (Wasserman & Faust, 1994). If a network is set up in such a way that there are no other paths that these other actors can take to communicate with each other, this actor in the middle has high importance (Wasserman & Faust, 1994). Removing a node with high betweenness can disrupt the flow of information through the network and introduce fragmentation (Borgatti & Everett, 2006).

Network Centralization and a Core/Periphery Structure

Network Centralization considers the centrality measures at a network wide level and determines the extent to which the network exhibits a star structure. Centrality refers to the importance of an individual actor; while centralization refers to the network as a whole. For each of Freeman's (1977) centrality measures, a network centralization score can be calculated which indicates how centralized the network is. Network centralization is important to this research because it shows overall how centralized or decentralized the network of vloggers may be.

A common social network structure is a core/periphery network. Core/periphery structure has been found to have important implications to the communication effectiveness of networks such as online hate groups or open source software development (Chau & Xu, 2007). It is a hybrid structure that exhibits some form of centralization as a core, but also has a less centralized periphery. The ideal core/periphery structure is a dense, connected core surrounded by a sparse, loosely connected periphery (Borgatti & Everett, 1999) (Figure 1 shows an example where the dark nodes are the core and the lighter nodes are the periphery). The presence of core/periphery structure is determined by fitting a social network to a mathematical model. A fit of .5 (50%) or greater is considered a good fit (Long & Siau, 2006).

RESEARCH METHOD

To investigate how vloggers interact with each other in a vloggers' community, we applied both quantitative and qualitative methods in this research. The social network analysis identified the overall structure of the vloggers' community as well as the relationships among all the vloggers in the community. Interviews were conducted on the vloggers who are in the core of the community.

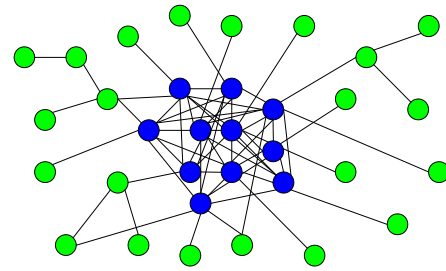


Figure 1 - A Core/Periphery Network

This study used a sample of vloggers who identified themselves as personal vloggers from VlogDIR, a well known vlogger directory site (vlogdir.com) where vloggers voluntarily opt-in to a certain category of the directory. A list of personal vloggers who have registered at VlogDir under the personal vlogger category was used in this study.

Social Network Analysis

The social network analysis was conducted in a five-step process.

- 1) A computer program known as a spider was used to capture the URLs of the personal vlogger's vlogs from VlogDIR. 244 of these URLs were collected from VlogDIR's personal vlogger list into a file.
- 2) These URLs were then manually cleaned to ensure they met the following criteria for being active vlogs: 1) The URL had to be a personal vlog. 2) It had to have three video postings within the last three months of the time of this study. After the data cleaning, only 74 of the original 244 URLs remained in the list.
- 3) The URLs were entered into Technorati, a blog tracking website, to obtain URLs of other blogs that linked to the vlogs. Technorati keeps track of what are known as "inbound links" or links to a blog URL. It also tracks outbound links to other blogs as one blog's inbound link is an outbound link on the other blog. For each personal vlogger's URL, all other URLs that linked to the vlogger's URL were captured. A computer program was used to automate the collection of these inbound links to each vlogger's URL and store them in a database.
- 4) A sociomatrix was built based on the links between the vlogs that were collected. A sociomatrix is a mathematical representation of a social network that uses data placed in rows and columns to signify relationships between individuals in the network. Table 1 is a theoretical example of a sociomatrix that represents linking relationships for four individuals. Another computer program was used to automate the generation of the sociomatrix. This sociomatrix was 74 rows by 74 columns.

Table 1 - A Sociomatrix

0	A	B	C	D
A	0	1	1	1
B	1	0	0	1
C	1	0	0	0
D	1	1	0	0

5) The sociomatrix was then used as the dataset for UCINET, a social network analysis software package. UCINET created the visualization of the network as well as calculated the social network measures of centrality and core/periphery fitness.

Results of social network analysis

Figure 2 shows the social network of the vloggers' community. At the individual level, nodes 12, 34, 35, 27, 17, and 7 had the highest degree centrality. These nodes had a degree of 9 or higher. All of these nodes were part of the core. The core's density is rather low, resulting in a loose core. Nodes 35, 7, 34, 12, 27, and 37 had the highest betweenness centrality. These nodes had a normalized betweenness of 13 or higher. These nodes served as bridges and connected most of the loose core together. Nodes 12, 34, 7, 17, 35, and 27 had the highest closeness centrality. These nodes had a normalized closeness of 48 or higher. These nodes were also in the core.

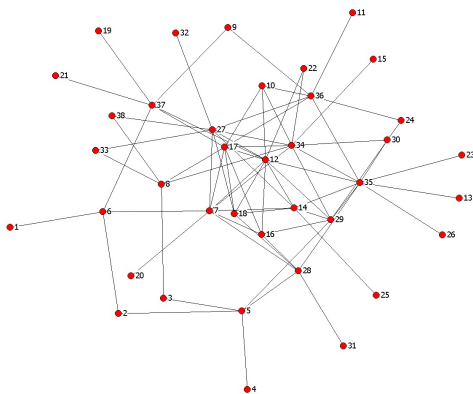


Figure 2 – Social Network of vloggers' community

The network centralization scores are presented in Table 2. According to Long and Siau (2006), the network centralization scores were relatively low. All of the centralization scores were less than 50%, which is the midpoint between a centralized and decentralized network. The highest level of centralization was exhibited when calculated using closeness. This means that overall nodes had a higher level of closeness than degree or betweenness.

Table 2- Network Centralization Scores

Network Degree	Normalized Network Degree	Network Betweenness	Network Closeness
20.27%	1.80%	17.46%	30.05%

Results of the core/periphery analysis are shown in Table 3. Overall, this network exhibits a core/periphery structure since a fitness score over .50 indicates a good fit of the core/periphery model.

Table 3 - Core/Periphery Analysis Results

Nodes in Core	Nodes in Periphery
7 12 14 16 17 18 27 28	1 2 3 4 5 6 8 9 10 11 13
29 34 35 36	15 19 20 21 22 23 24 25
	26 30 31 32 33 37 38

Final Core/Periphery Fitness: 0.544

Qualitative Interviews

To better understand why and how the vloggers interacted in the community, we interviewed thirteen vloggers who had the highest degree centrality scores in the network. In addition to general demographic information such as age, gender, and occupation, each interviewee was asked the following questions:

- When did you start vlogging?
- How much time do you spend watching vlogs?
- How often do you post vlogs?
- How do you see your role in the Vlogger community?
- What types of vlogs do you like to watch?
- Why do you vlog?
- Do you think it's important for the vlogger community for people to watch and comment on other people's vlogs? Please explain.
- Is it important to you that others watch and comment on your vlog? Please explain.

The interviews were recorded and subsequently transcribed. The data was then coded into themes following guidelines on open coding suggested by Strauss & Corbin (1998).

Qualitative Results

The results of open coding were a list of concepts, which were then categorized into four themes. Each theme was created by logically grouping the specific concepts together into a broader category. The themes identified from this study include: motivations for vlogging, reasons to choose video as a medium for blogging, characteristics of vloggers, and interactions in the community.

Motivations for Vlogging. Vloggers had many reasons for vlogging, but most prominent were being able to post and watch vlogs about peoples' personal lives. This involved sharing personal stories, expressions, opinions, environments, and creativity with their family, friends, or other vloggers. Part of the reasons for sharing with other vloggers beyond family and friends was to gain attention from others.

Often vloggers also saw their videos as a way to entertain others, as one vlogger said "It's partly to entertain people." Some vloggers found that vlogging was fun to do and even

considered it a personal hobby. Vloggers also found that vlogging is a great way to make friends with people around the world based upon similar interests.

Reasons to Choose Video as a Medium for Blogging. Vloggers chose video mainly for its advantages over other media, such as text and audio. First and foremost, video is a rich medium consisting of a combination of audio and moving images. Vloggers found that video created a more personal experience than text or photos as they could see facial expressions and hear tones of voice.

Vloggers also stated that they had greater flexibility with video than with text or photo blogs and it was much easier than public access TV. With a video camera it was as easy as recording a show and uploading it online. For example a vlogger cited that he “loves being able to just turn on the camera and make something” with vlogs.

Vloggers were also able to express themselves more with video than with other forms of media such as writing. A vlogger stated that “I’m able to do more with videos than I can with writing.”

Vlogging is a highly interactive medium, which allows for conversations and connections with other vloggers. Viewers can comment on vlogs and vloggers can comment on each others’ vlogs which leads to conversations.

Vlogs are a new form of consumer created media beyond text blogs or public access television. Vloggers make videos and post them on the internet for anyone to watch which allows them to have a voice and engage in intelligent conversations.

Characteristics of Vloggers. Vloggers reported that they primarily vlogged during their free time. Jobs and family responsibilities often took precedence over vlogging. Some vloggers spend up to two to three hours a day watching vlogs and post up to every day, especially during special weeks such as videoblogging week (videobloggingweek2007.blogspot.com).

Vloggers usually had experience with blogs and/or video production before they started vlogging. They were using video long before they started putting their videos online and some of them even knew how to edit their videos and burn them to compact disc.

Most vloggers interviewed also had standards for production quality, both in terms of the audio/video quality and original/creative content. Vloggers had expectations of audio quality in the vlogs that they watched and also expected for the content of the video to be creative/original.

Interaction in the Community. The exchange of feedback is a social norm in the vlogger community. Vloggers often leave feedback in the form of comments on vlogs that they watch. Leaving positive feedback on a vlog was interpreted by vloggers as someone watched their vlog and enjoyed it enough to leave a comment that acknowledged that they enjoyed it. Comments left on vlogs almost always led to

other forms of online interactions such as instant messaging, e-mail, and other means. Often times, online friendships turned into real life interactions such as group events like VloggerCon (vloggercon.com) or local meet-ups. Some of the larger group events were organized by a core group of people; while other events such as local meet-ups were just vloggers making plans together.

Overall vloggers were found to be supportive of each other and offered help or advice when they could. Vloggers even encouraged each other to post more vlogs, especially the newer ones that were still finding their voice. One vlogger had an insightful comment: “A lot of people have trouble finding their voice. So many people say that I don’t have anything to say and who would want to listen to me. That’s a big myth that the entertainment industry has perpetrated on all of us is that they are the only ones who have something to say and we’re supposed to listen. We all have something to say.” Sometimes this support came in the form of constructive criticism for their show. These comments served as useful ways to increase the production quality of vlogs that were commented on. They also served as a feedback mechanism to determine which topics or vlog styles the audience enjoys so that they may be incorporated into future vlogs.

Vloggers watch and create vlogs based upon their interests. This creates a community based upon the interactions of those with the same interests. Unlike television, vloggers can pick and choose what vlogs they would like to watch. Vloggers typically watch vlogs that they enjoy and those of their friends or people they know. A vlogger noted that “we can be very specific and subjective which allows us to choose what we want to watch and not watch.” and another said “I watch people that I like.” It was also found that those with similar interests would typically be the ones to comment on a vlogger’s vlog. Most vloggers gave statements similar to “I’ll get comments from many people who share similar interests.”

One interesting note about the vlogger community is that since it consists of vloggers watching and creating vlogs based upon interests, it is a somewhat decentralized community. No one is in direct control of the community. Instead, the culmination of all of the individual vlogger interactions is what creates a loosely bounded and decentralized community. A vlogger notes that “other than reading vlog posts and watching each other’s videos, no one was directly telephoning anyone, directing anyone, there has been no one single mastermind behind the movement.”

DISCUSSIONS

The results of social network analysis on personal bloggers in VlogDIR suggest that the vloggers’ community is a decentralized community and exhibits a core/periphery structure. Core/periphery is a hybrid structure that exhibits some form of centralization as a core, but also has a less centralized periphery. According to Krebs and Holley (2004), core/periphery structure is the most efficient and

sustainable network (Krebs & Holley, 2004), as this arrangement allows information to move the fastest through the network.

The qualitative interview results confirm this finding and indicate that a possible reason for such a structure is that vloggers watch and create vlogs mostly based upon interests. Vloggers that share similar interests, views, or opinions are usually inter-connected and forms the bases of the community. Since vloggers in a community could have various interests, the network formed based on these different interests will naturally be less centralized. Vloggers with similar interests are likely to form a sub group with some people in the core and others in the periphery.

The qualitative interview results also show that vlogs are a highly interactive medium and are filled with conversations. Interactions in the form of feedback occur quite frequently and are a social norm of the vlogger's community. Vlogger feedback is a source of satisfaction and is often supportive. This exchange of feedback is what creates the vlogger's community. However, vloggers also have other forms of online communication and sometimes even move their interactions offline in the form of groups or one-on-one meetings. Such interactions in the vlogger's community are somewhat similar to interactions in other forms of blog communities. (e.g., Boyd, 2006).

In addition, according to the qualitative interviews the major motivations for vlogging include sharing personal stories and opinions with others, gaining attention from others, entertaining others, and making friends with others based upon similar interests. Many of these motivations were also found to be motivations for text and photo blogging (e.g., Boyd, 2006).

The differences between vlogs and other forms of blogs generally have to do with the richness of the media added by video. Based on the qualitative interview results, it appears that video tends to make vlogs more personal and emotionally intimate than text blogs. Blogging was seen as a new wave of consumer journalism when it became popular. Vlogs are now enjoying that same status as another form of consumer created media.

CONCLUSIONS

This research is one of the first studies to investigate the vloggers' community. The results of this research provide better understanding of vlogging and can serve as a foundation for future research.

REFERENCES

1. Borgatti, S. P., & Everett, M. G. (1999). Models of Core/Periphery Structures. *Social Networks*, 21, 375-395.
2. Borgatti, S. P., & Everett, M. G. (2006). A Graph-Theoretic Perspective on Centrality. *Social Networks*, 28(4), 466-484.
3. Boyd, D. (2006). A Blogger's Blog: Exploring the Definition of a Medium. *Reconstruction: Studies in Contemporary Culture*, 6(4), <http://reconstruction.eserver.org/064/boyd.shtml>.
4. Chau, M., & Xu, J. (2007). Mining Communities and Their Relationships in Blogs: A Study of Online Hate Groups. *International Journal of Human-Computer Studies*, 65(1), 57-70.
5. Clayfield, M. (2007). A Certain Tendency in Videoblogging and Rethinking the Rebirth of the Author. *Post Identity*, 5(1), <http://hdl.handle.net/2027/spo.pid9999.0005.2106>.
6. Freeman, L. C. (1977). A Set of Measures of Centrality Based on Betweenness. *Sociometry*, 40, 35-41.
7. Gordon, S. (2006). Rise of the Blog (Journal-Based Website). *IEE Review*, 52(3), 32-35.
8. Krebs, V., & Holley, J. (2002). Building Smart Communities Through Network Weaving [Electronic Version]. Retrieved June, 2007 from <http://www.orgnet.com/BuildingNetworks.pdf>.
9. Long, Y., & Siau, K. (2006). *Social Network Dynamics for Open Source Software Projects*. Paper presented at the Americas Conference on Information Systems, Acapulco, Mexico.
10. Luers, W. (2007). Cinema Without Show Business: A Poetics of Vlogging. *Post Identity*, 5(1), <http://hdl.handle.net/2027/spo.pid9999.0005.2105>.
11. Miles, A. (2003). Softvideography. In M. Eskelinen & R. Koskimaa (Eds.), *Cybertext Yearbook 2002-2003* (pp. 218-236). Saarijärvi: University of Jyväskylä.
12. Strauss, A., & Corbin, J. (1998). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. London, UK: SAGE Publications.
13. Technorati. (2007). About Us [Electronic Version]. *Technorati*. Retrieved June 2007 from <http://technorati.com/about/>.
14. Wasserman, S., & Faust, K. (1994). *Social Network Analysis: Method and Applications*. Cambridge, UK: Cambridge University Press.